Nexim Central Server Lite

Host Interface Specification

V2.5.100

FUJI CORPORATION

Contents

Revision History

Rev.	Date	Description
V1.6.0	Mar 28, 2017	FIRST EDITION
V2.5.100	Jul 27 2023	Added bellow messages -FEEDERLIST -FEEDERLIST_ACK
	Des 20 2023	Added information for NXTR -2 Configuration -6 Event Message Specification
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About this document

The contents of this document are subject to change without notice.

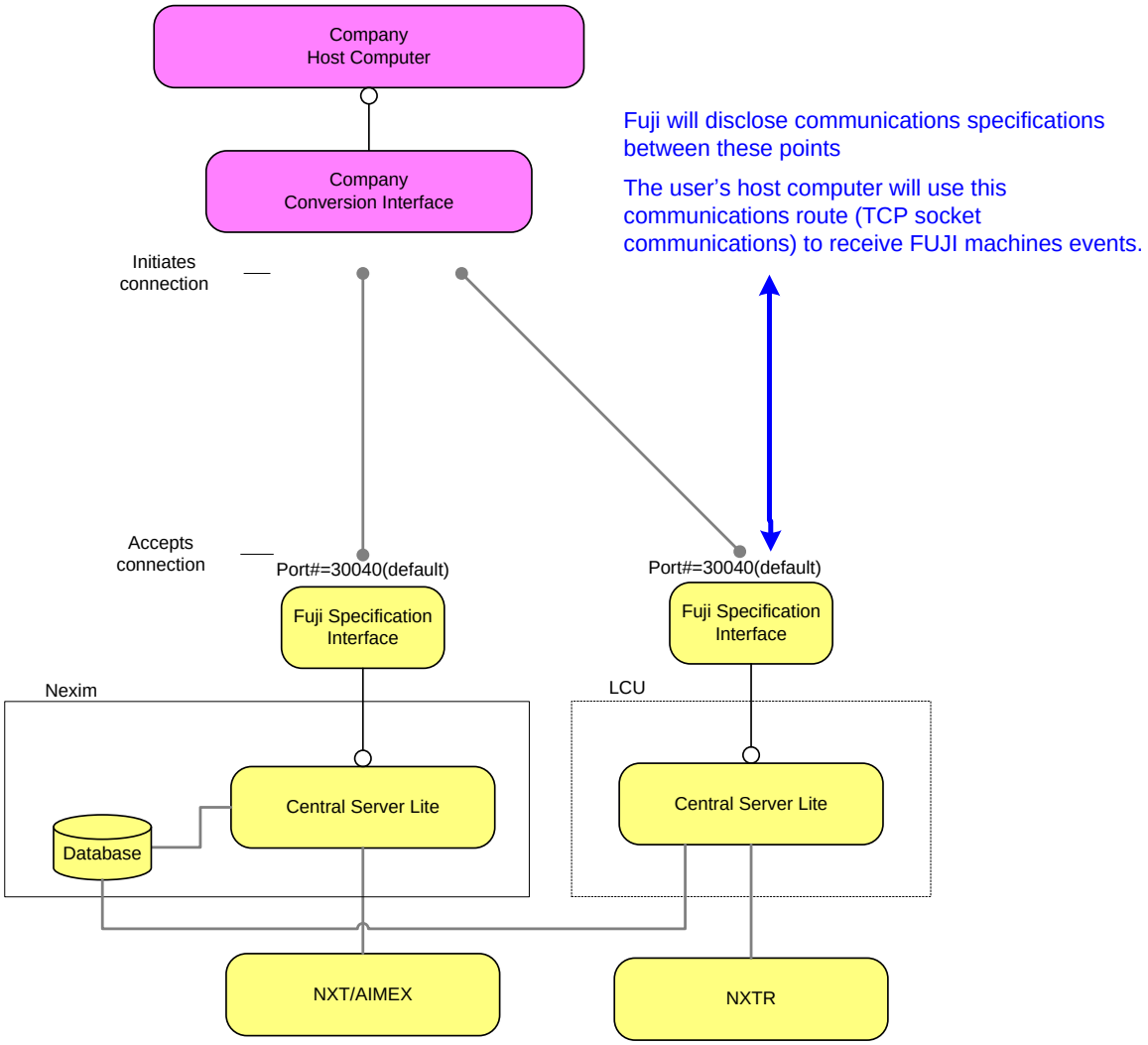
1 Purpose and Preconditions

This document describes technical information that will enable the user's host computer to receive Machine production events from Central Server Lite. The following preconditions apply.

1. The technical information described in this document is about events related to Machine production.
2. This technical information is a protocol specification for data communications between the data communications server software (hereafter referred to as Central Server Lite) and the user's host computer.
3. The protocol specification for data communications used by Central Server Lite is a Fuji specification.
4. Since the protocol specification used by the user's host computer is different to that used by Fuji, it will be necessary to create an interface (hereafter referred to as a conversion interface) for converting Fuji specification data into data that can be used on the user's host computer, so that data communications between the systems can be carried out via this conversion interface.
5. The user is responsible for developing the conversion interface. Fuji will disclose the necessary technical information, for which the user is required to enter a non-disclosure agreement, to enable the user to build the interface.

2 Configuration

The system configuration is as follows.



- The user's host computer (including the conversion interface) and Central Server Lite (including Fuji specification interface) must exist on the same local network.
- TCP socket communications must be used.
- The conversion interface for the user's host computer (hereafter simply referred to as the host computer) connects to the specified Port# for the Fuji specification interface on Central Server Lite (hereafter simply referred to as Central Server Lite).
- A one-to-one connection is established between the host computer and Central Server Lite. In other words, multiple host servers are unable to connect to Central Server Lite at once.
- Central Server Lite accepts the connection from the host computer via the specified port number.
  Central Server Lite port # = 30040 (default)
- A single Central Server Lite can manage up to 32 NXT modules.

■Installing

Install with the installer for no verification.

■When using Profiler

1. Install Fujitrax Web by following the procedure below.

- Select Fuji Nexim Do Services from the list of all programs in [Uninstall or change a program] in [Programs].
- Select [Change] for installing.
- Install with the check boxes for [Verifier Web] and [Profiler Web] selected.

2. Specify profiling settings in Fujitrax Web.

3 Event Message List

Event	Direction	Target App	Description	Message Format	Event can be disabled
Initial process	Host ➔ AP	All	Valid event settings report	STX **SETEV** Tab SeqID Tab MachineName Tab NumList CR EventName Tab Ack CR : EventName Tab Ack CR ETX	X(Always enabled)
	AP ➔ Host	All	Valid event settings report reply	STX **SETEV_ACK** Tab SeqID Tab MachineName Tab Result ETX	X(Always enabled)
	Host ➔ AP	All	Event notice start report	STX **STARTEV** Tab SeqID Tab MachineName ETX	X(Always enabled)
	AP ➔ Host	All	Event notice start report reply	STX **STARTEV_ACK** Tab SeqID Tab MachineName Tab Result ETX	X(Always enabled)
Connection check	AP ➔ Host	All	Connection check request	STX **KEEPALIVE** Tab SeqID ETX	X(Always enabled)
	Host ➔ AP	All	Connection check request reply	STX **KEEPALIVE_ACK** Tab SeqID ETX	X(Always enabled)
Parts unload	AP ➔ Host	Central Server Lite	Parts unload report	STX **UNLOADCOMP** Tab SeqID Tab Time Tab LineName Tab MachineName Tab ModuleNo Tab NumList CR StageNo Tab SlotNo Tab PartNo Tab FeederID Tab ReelID Tab Quantity Tab RemainingTime CR : StageNo Tab SlotNo Tab PartNo Tab FeederID Tab ReelID Tab Quantity Tab RemainingTime CR ETX	Yes
	Host ➔ AP	Central Server Lite	Parts unload report reply	STX **UNLOADCOMP_ACK** Tab SeqID Tab MachineName Tab ModuleNo Tab NumList CR StageNo Tab SlotNo Tab Result Tab PartNo Tab FeederID Tab ReelID Tab RemainingTime CR : StageNo Tab SlotNo Tab Result Tab PartNo Tab FeederID Tab ReelID Tab RemainingTime CR ETX	As above

Event	Direction	Target App	Description	Message Format	Event can be disabled
Parts out	AP ➔ Host	Central Server Lite	Parts out report	STX **CHANGECOMP** Tab SeqID Tab Time Tab LineName Tab MachineName Tab ModuleNo Tab NumList CR StageNo Tab SlotNo Tab PartNo Tab FeederID Tab ReelID Tab Quantity CR : StageNo Tab SlotNo Tab PartNo Tab FeederID Tab ReelID Tab Quantity CR ETX	Yes
	Host ➔ AP	Central Server Lite	Parts out report reply	STX **CHANGECOMP_ACK** Tab SeqID Tab MachineName Tab ModuleNo Tab NumList CR StageNo Tab SlotNo Tab Result Tab PartNo Tab FeederID Tab ReelID Tab RemainingTime CR : StageNo Tab SlotNo Tab Result Tab PartNo Tab FeederID Tab ReelID Tab RemainingTime CR ETX	As above
Program change completion ||	AP ➔Host	Central Server Lite	Program change completion notification ||	STX **PGCHANGEII** Tab SeqID Tab Time Tab LineName Tab MachineName Tab ModuleNo Tab LaneNo Tab ProgramName Tab NumList CR StageNo Tab SlotNo Tab NumList CR PartNo CR : PartNo CR : StageNo Tab SlotNo Tab NumList CR PartNo CR : PartNo CR ETX	Yes
	Host ➔AP	Central Server Lite	Program change completion notification || reply	STX **PGCHANGEII_ACK** Tab SeqID Tab Result Tab MachineName Tab ModuleNo Tab LaneNo Tab ProgramName ETX	As above
BOM list data notification	AP ➔Host	Central Server Lite	BOM list notification	STX **BOMLIST** Tab SeqID Tab Time Tab LineName Tab MachineName Tab LaneNo Tab ProgramName Tab NumList CR BlockNo Tab PartNo Tab Reference CR : BlockNo Tab PartNo Tab Reference CR ETX	Yes
	Host ➔AP	Central Server Lite	BOM list notification reply	STX **BOMLIST_ACK** Tab SeqID Tab Result Tab MachineName Tab LaneNo Tab ProgramName ETX	As above

Event	Direction	Target App	Description	Message Format	Event can be disabled
Production start	AP ➔Host	Central Server Lite	Production start notification	STX**PRODSTARTED**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabLaneNoTabProductModeTabProgramNameTabPanelNoETX	Yes
	Host ➔AP	Central Server Lite	Production start notification reply	STX**PRODSTARTED_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoTabLaneNoTabProductModeTabProgramNameTabPanelNoETX	As above
Production completed	AP➔Host	Central Server Lite	Production completed	STX**PRODCOMPLETED**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabLaneNoTabProductModeTabProgramNameTabPanelNoTabBlockCountTabBlockSkipCountETX	Yes
	Host ➔AP	Central Server Lite	Production start notification reply	STX**PRODCOMPLETED_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoTabLaneNoTabProductModeTabProgramNameTabPanelNoTabBlockCountTabBlockSkipCountETX	As above
Machine state change	AP ➔Host	Central Server Lite	Machine state change notification	STX**MCSTATECHANGE**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabPreviousStatusTabCurrectStatusETX	Yes
	Host ➔AP	Central Server Lite	Machine state change notification reply	STX**MCSTATECHANGE_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoETX	As above
Machine alarm ON	AP ➔Host	Central Server Lite	Machine alarm ON notification	STX**MCALARMON**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabErrorCodeTabSubErrorCodeETX	Yes
	Host ➔AP	Central Server Lite	Machine alarm ON notification reply	STX**MCALARMON_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoETX	As above
Machine alarm OFF	AP ➔Host	Central Server Lite	Machine alarm OFF notification	STX**MCALARMOFF**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabErrorCodeTabSubErrorCodeETX	Yes
	Host ➔AP	Central Server Lite	Machine alarm OFF notification reply	STX**MCALARMOFF_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoETX	As above

Event	Direction	Target App	Description	Message Format	Event can be disabled
PartsUsage	AP ➔ Host	Central Server Lite	Parts use count report	STX**PARTSUSAGE**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabLaneNoTabProgramNameTabPanelNoTab NumListCR StageNoTabSlotNoTabPartNameTabAVLNameTabPartsUsageTabPickupCountTabErrorPartsTabErrorRejectTabRejectPartsTabDislodgedPartsTabRescancountTabNoPickup CR : StageNoTabSlotNoTabPartNameTabAVLNameTabPartsUsageTabPickupCountTabErrorPartsTabErrorRejectTabRejectPartsTabDislodgedPartsTabRescancountTabNoPickup CR ETX	Yes
	Host ➔ AP	Central Server Lite	Parts use count report reply	STX**PARTSUSAGE_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoTabLaneNoTabProgramNameTabPanelNoETX	As above
Feeder pickup count (Unsupported)	AP ➔ Host	Central Server Lite	Feeder pickup count report	STX**FEEDERUSAGE**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTab NumListCR StageNoTabSlotNoTabFeederIDTabFeederNameTabPickupCountTabErrorFeederTabErrorRejectTabRejectFeederTabDislodgedFeederTabRescancountTabNoPickup CR : StageNoTabSlotNoTabFeederIDTabFeederNameTabPickupCountTabErrorFeederTabErrorRejectTabRejectFeederTabDislodgedFeederTabRescancountTabNoPickup CR ETX	Yes
	Host ➔ AP	Central Server Lite	Feeder pickup count reply	STX**FEEDERUSAGE_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoETX	As above

Event	Direction	Target AP	Description	Message Format	Event can be disabled
Head Pickup count	AP ➔ Host	Central Server Lite	Head installation report	STX**HEADUSAGE**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTab NumListCR HeadNoTabHeadIDTabHeadNameTabPickupCountTabErrorHeadTabErrorRejectTabRejectHeadTab DislodgedHeadTabRescancountTabNoPickupCR : HeadNoTabHeadIDTabHeadNameTabPickupCountTabErrorHeadTabErrorRejectTabRejectHeadTab DislodgedHeadTabRescancountTabNoPickupCR ETX	Yes
	Host ➔ AP	Central Server Lite	Head installation report reply	STX**HEADUSAGE_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoETX	As above
Nozzle pickup count	AP ➔ Host	Central Server Lite	Nozzle pickup count report	STX**NOZZLEUSAGE**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTab NumListCR NozzleNoTabNozzlePitNoTabNozzleIDTabNozzleNameTabNozzleSTIDTabNozzleSTNameTabPick upCountTabErrorNozzleTabErrorRejectTabRejectNozzleTabDislodgedNozzleTabRescancountTab NoPickupCR : NozzleNoTabNozzlePitNoTabNozzleIDTabNozzleNameTabNozzleSTIDTabNozzleSTNameTabPick upCountTabErrorNozzleTabErrorRejectTabRejectNozzleTabDislodgedNozzleTabRescancountTab NoPickupCR ETX	Yes
	Host ➔ AP	Central Server Lite	Nozzle pickup count reply	STX**NOZZLEUSAGE_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoETX	As above

Event	Direction	Target AP	Description	Message Format	Event can be disabled
Holder error report	AP➔Host	Central Server Lite	Holder error report	STX**HOLDERERROR**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabLaneNoTabProgramNameTabPanelNoTab NumListCR StageNoTabSlotNoTabHeadNoTabHolderNoTabReferenceTabErrorCodeTabSubErrorCodeCR : StageNoTabSlotNoTabHeadNoTabHolderNoTabReferenceTabErrorCodeTabSubErrorCodeCRETX	Yes
	Host➔AP	Central Server Lite	Holder error report reply	STX**HOLDERERROR_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoTabLaneNoTabProgramNameTabPanelNoETX	As above

Event	Direction	Target AP	Description	Message Format	Event can be disabled
Change device status command	Host➔AP	Central Server Lite	Change device status command	STX**SLOTSTTCHG**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTab NumListCR StageNoTabSlotNoTabStatusTabSubStatusCR : StageNoTabSlotNoTabStatusTabSubStatusCRETX	X(Always enabled)
	AP➔Host	Central Server Lite	Change device status command reply	STX**SLOTSTTCHG_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoETX	X(Always enabled)
Feeder setup	AP➔Host	Central Server Lite	Feeder setup report	STX**FEEDERSETUP**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabProgramNameTab NumListCR StageNoTabSlotNoTabFeederIDCR : StageNoTabSlotNoTabFeederIDCR ETX	Yes
	Host➔AP	Central Server Lite	Feeder setup report reply	STX**FEEDERSETUP_ACK**TabSeqIDTabMachineNameTabModuleNoTab NumListCR StageNoTabSlotNoTabResultTabFeederIDTabSupplyTabCompChgFunctionTab NumList2CR ReelIDTabPartNoTabVendorTabLotNoTabDateCodeTabLightingclassTabQuantityTabTrayCountTabTrayX**Tab**TrayYTabCompChgStatusCR : ReelIDTabPartNoTabVendorTabLotNoTabDateCodeTabLightingclassTabQuantityTabTrayCountTabTrayX**Tab**TrayYTabCompChgStatusCRTab Ne**xt**PosNumList CR StageNoTabSlotNoCR : StageNoTabSlotNoCRTab OrignalPosNumList CR StageNoTabSlotNoCR : StageNoTabSlotNoCR :	As above

Event	Direction	Target AP	Description	Message Format	Event can be disabled
Part resupply request	Host➔AP	Central Server Lite	Part resupply request	STX **PARTSREFILL** Tab SeqID Tab Time Tab MachineName Tab ModuleNo Tab StageNo Tab SlotNo Tab FeederID Tab DeviceStatus Tab CompChgFunction Tab VerifyType Tab NumList CR ReelID Tab PartNo Tab Vendor Tab LotNo Tab DateCode Tab Lightingclass Tab Quantity Tab TrayCount Tab TrayX Tab TrayY Tab CompChgStatus CR : ReelID Tab PartNo Tab Vendor Tab LotNo Tab DateCode Tab Lightingclass Tab Quantity Tab TrayCount Tab TrayX Tab TrayY Tab CompChgStatus CR ETX	X(Always enabled)
	AP➔Host	Central Server Lite	Part resupply request reply	STX **PARTSREFILL_ACK** Tab SeqID Tab Result ETX	X(Always enabled)
Error report	AP➔Host	Central Server Lite	Error report	STX **ERRORREPORT** Tab SeqID Tab Time Tab LineName Tab MachineName Tab ModuleNo Tab StageNo Tab SlotNo Tab Status Tab Quantity Tab TrayCount Tab TrayX Tab TrayY ETX	Yes
	Host➔AP	Central Server Lite	Error report reply	STX **ERRORREPORT_ACK** Tab SeqID Tab Result ETX	As above
Production completed II	AP➔Host	Central Server Lite	Production completed II	STX **PRODCOMPLETEII** Tab SeqID Tab Time Tab LineName Tab MachineName Tab ModuleNo Tab LaneNo Tab ProductMode Tab ProgramName Tab PanelNo Tab BlockCount Tab BlockSkipCount Tab BSInfoBit Tab CycleTime ETX	Yes
	Host➔AP	Central Server Lite	Production completed II reply	STX **PRODCOMPLETEDII_ACK** Tab SeqID Tab Result Tab MachineName Tab ModuleNo Tab LaneNo Tab ProductMode Tab ProgramName Tab PanelNo ETX	As above
Panel checkin	AP ➔ Host	Central Server	Panel checkin report	STX **PCBCHECKIN** Tab SeqID Tab Time Tab LineName Tab MachineName Tab LaneNo Tab ProgramName Tab PanelID Tab CriticalMslRemainingTime ETX	Yes
	Host ➔ AP	Central Server	Panel checkin report reply	STX **PCBCHECKIN_ACK** Tab SeqID Tab Result Tab MachineName Tab LaneNo Tab ProgramName Tab PanelID ETX	As above

Event	Direction	Target AP	Description	Message Format	イベント無効化
Panel checkout	AP ➔ Host	Central Server	Panel checkout report	STX **PCBCHECKOUT** Tab SeqID Tab Time Tab LineName Tab MachineName Tab LaneNo Tab ProgramName Tab PanelID Tab CriticalMslRemainingTime Tab PanelStatus Tab NumList CR ModuleNo Tab StageNo Tab SlotNo Tab PartNo Tab ReelID Tab FeederID Tab PickupCount Tab ErrorParts Tab RejectParts Tab DislodgedParts Tab NoPickup CR : ModuleNo Tab StageNo Tab SlotNo Tab PartNo Tab ReelID Tab FeederID Tab PickupCount Tab ErrorParts Tab RejectParts Tab DislodgedParts Tab NoPickup CR ETX	Yes Note 1
	Host ➔ AP	Central Server	Panel checkout report reply	STX **PCBCHECKOUT_ACK** Tab SeqID Tab Result Tab MachineName Tab LaneNo Tab ProgramName Tab PanelID ETX	As above
Panel checkout II	AP ➔ Host	Central Server	Panel checkout notification II	STX **PCBCHECKOUTII** Tab SeqID Tab Time Tab LineName Tab MachineName Tab LaneNo Tab ProgramName Tab PanelID Tab CriticalMslRemainingTime Tab PanelStatu Tab NumList CR SequenceNo Tab ModuleNo Tab StageNo Tab SlotNo Tab PartNo Tab ReelID Tab FeederID Tab PickupStatus Tab BlockNo Tab Reference CR : SequenceNo Tab ModuleNo Tab StageNo Tab SlotNo Tab PartNo Tab ReelID Tab FeederID Tab PickupStatus Tab BlockNo Tab Reference CR ETX	Yes Note 1
	Host ➔ AP	Central Server	Panel checkout notification II acknowledgement	STX **PCBCHECKOUTII_ACK** Tab SeqID Tab Result Tab MachineName Tab LaneNo Tab ProgramName Tab PanelID ETX	As above
Panel checkout III	AP ➔ Host	Central Server	PCB checkout report III	STX **PCBCHECKOUTIII** Tab SeqID Tab Time Tab LineName Tab MachineName Tab LaneNo Tab ProgramName Tab PanelID Tab CriticalMslRemainingTime Tab PanelStatus Tab NumList CR SequenceNo Tab ModuleNo Tab StageNo Tab SlotNo Tab PartNo Tab ReelID Tab FeederID Tab PickupStatus Tab BlockNo Tab Reference Tab Vendor Tab LotNo Tab DateCode Tab LIghtingclass CR : SequenceNo Tab ModuleNo Tab StageNo Tab SlotNo Tab PartNo Tab ReelID Tab FeederID Tab PickupStatus Tab BlockNo Tab Reference Tab Vendor Tab LotNo Tab DateCode Tab LIghtingclass CR ETX	Yes Note 2
	Host ➔ AP	Central Server	PCB checkout report III reply	STX **PCBCHECKOUTIII_ACK** Tab SeqID Tab Result Tab MachineName Tab LaneNo Tab ProgramName Tab PanelID ETX	As above

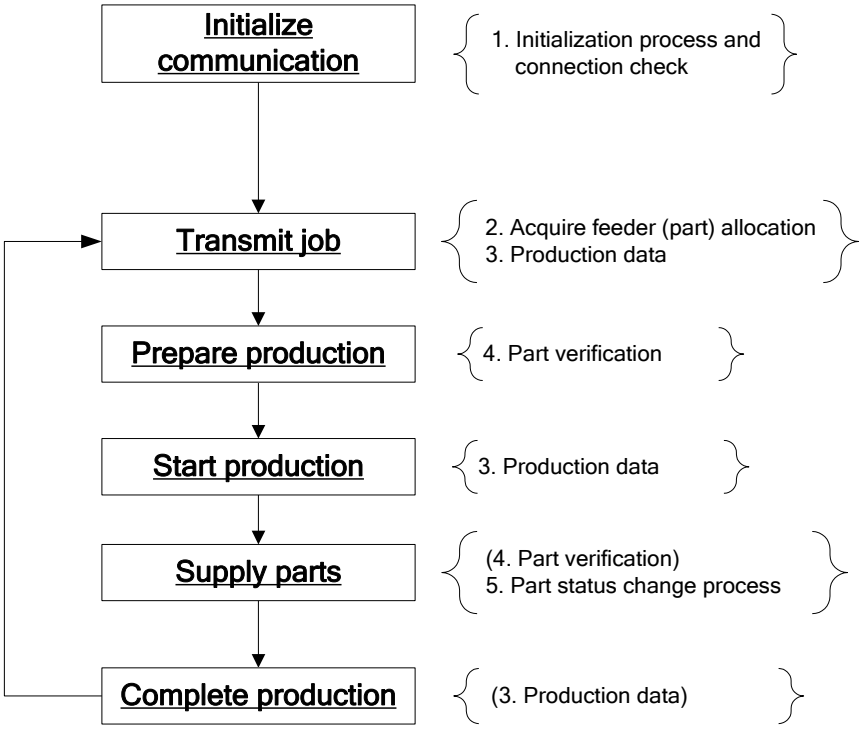
Event	Direction	Target AP	Description	Message Format	イベント無効化
Acquire feeder position information	Host➔AP	Central Server Lite	Acquire feeder position information request	STX**FEEDERLIST**TabSeqIDTabTimeTabLineNameTabMachineNameTabGroupNameTabProgramNameETX	X (Always enabled)
	AP➔Host	Central ServerLite	Acquire feeder position information request reply	STX**FEEDERLIST_ACK**TabSeqIDTabResultTabMachineNameTabGroupNameTabProgramNameTab NumListCR ModuleNoTabStageNoTabSlotNoTabFeederNameTabQTYTab NumList2CR PartNoCR : PartNoCRTab NumList3CR ReferenceCR : ReferenceCR :	X (Always enabled)

Note 1) When PCBCHECKOUTII is enabled, PCBCHECKOUT and PCBCHECKOUTIII notifications are not reported.
Note 2) When PCBCHECKOUTIII is enabled, PCBCHECKOUT and PCBCHECKOUTII notifications are not reported.

4 Creating the Host Computer

4.1 System Flowchart

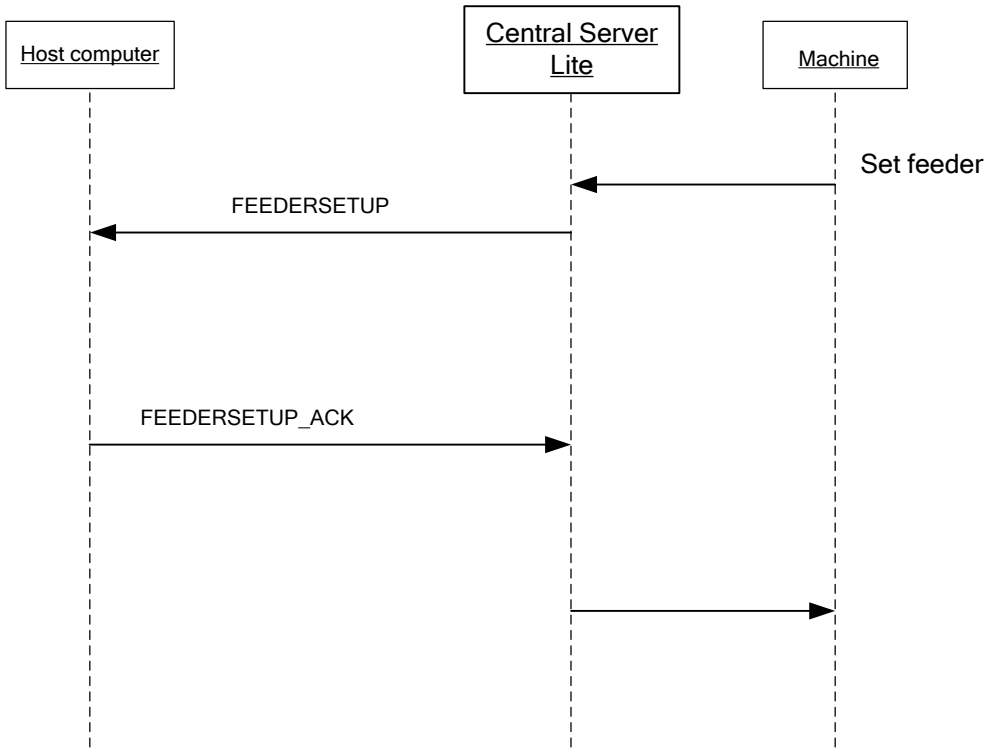
The flowchart below shows the layout for the system to create the host computer.
A detailed explanation of each part of the flowchart can be found on the following pages.



	Process	Details	Host computer support
1.	Initialization process and connection check	The initialization process is performed to allow the host computer to communicate with Central Server Lite. Furthermore, after they begin communicating, the host computer must periodically check the connection with Central Server Lite. *Refer to "6.3 Initial Process" and "6.4 Connection Check" for details.	Required
2.	Acquire feeder (part) allocation	Feeder allocation data is reported to the host computer from Central Server Lite. The host computer references this data and recommends the user to perform verification. *Refer to "6.5 Program Change Completion 2" for details.	
3.	Production data	Production data is reported to the host computer from Central Server Lite. The host computer processes the data when necessary. *Refer to "6 Event Message Specification" for details.	
4.	Part verification	The host computer must reply to the part verification report from Central Server Lite. *Refer to section "6.20 Feeder Setup" for details.	Required
5.	Part status change process	The status of the feeder (parts) used in production can be changed so that it is prohibited to use or parts out warnings can be displayed at the machine operation panel. The host computer processes the change when necessary. *Refer to "6.19 Change device status command"for details.	

4.2 Verification

4.2.1 Feeder verification

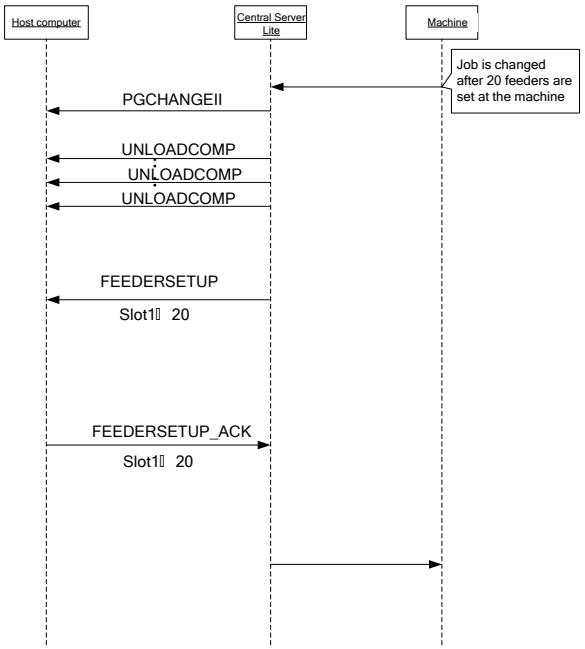


Feeder insertion and removal is monitored and verification performed. This function prevents feeders from being set at incorrect slots.
When a feeder is set at the machine, the slot number to which the feeder is set and the feeder ID (FEEDERSETUP event) are reported to the host computer. The host computer sends the verification results from the reported slot number and feeder ID to Central Server Lite (machine) within a specific time period.
Furthermore, when a feeder is removed from the machine, the slot number from which the feeder was removed and the feeder ID (UNLOADCOMP event) is reported to the host computer. The host computer can monitor feeder insertion and removal from these events.
Refer to "6 Event Message Specification" for details on the FEEDERSETUP and UNLOADCOMP events.

4.2.2 Verification during job transmission

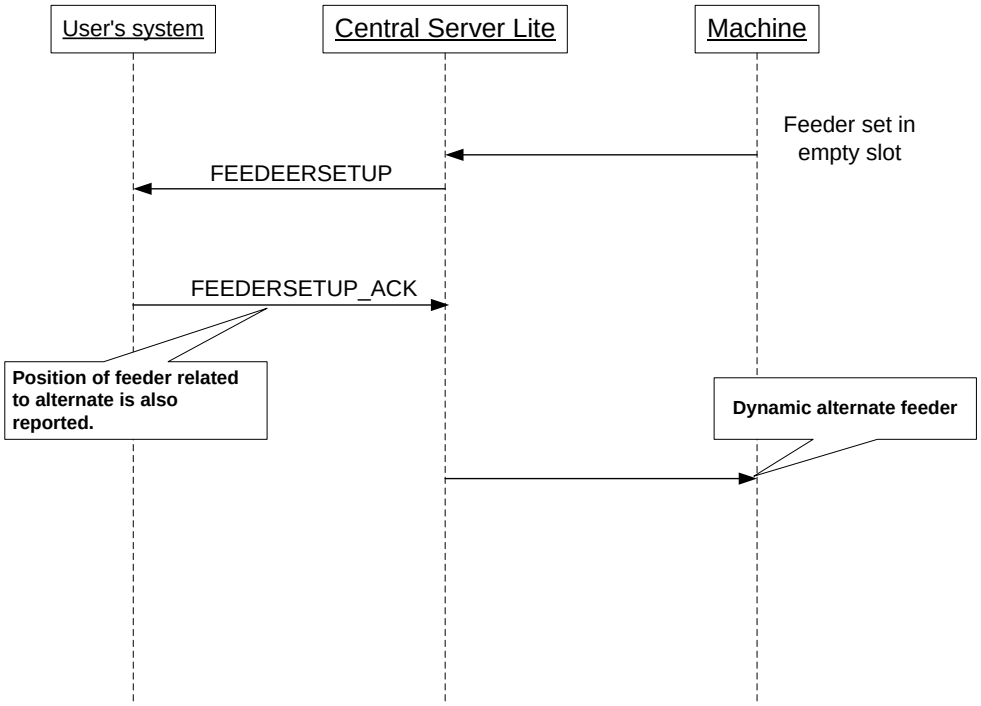
When a job is sent to the machine, UNLOADCOMP and FEEDERSETUP events are reported for all feeders set at the machine. This process allows the machine to acquire data for feeders currently set at the machine and reports the most current status to the machine. Therefore, the host computer must process UNLOADCOMP and FEEDERSETUP as normal.

*UNLOADCOMP and FEEDERSETUP are both reported when the machine is turned on. Therefore, perform the same process for the host computer. (Since the machine does not remember the job data, when it is turned on, the job is automatically sent).



When a job is sent to the machine, Central Server Lite reports the FEEDERSETUP event to the host computer. Central Server Lite gathers enquiries for feeders set at the machine and reports a single FEEDERSETUP event. Therefore, also reply with the FEEDERSETUP event for the host computer in the same way. (Central Server Lite reports the FEEDERSETUP event at each module).
*The previous diagram shows the process flow when 20 feeders are set at a module.

4.2.3 Dynamic alternate devices



The alternate feeder can be set anywhere as long as it is an empty slot in the same module as the original feeder. Also, only the required number of alternate feeders can be set. *The maximum number of alternate feeders that can be set is based on the machine specifications. When a feeder is set at the machine, the FEEDERSETUP even is reported to the host computer. Therefore, perform the same process for the host computer as "4.2.1. Feeder verification".

Important points

- This function can be enabled or disabled in KIT Line Configuration Lite.
- Create FEEDERSETUP reply events based on the following important points.
    - Define the slots and position for all slots related to the alternate feeder in the parameters for the alternate data.
        - Do not set the feeders own slot in the parameters.
        - When an alternate feeder is set at the machine, always add the original slot specified in the job to this parameter. Make this addition regardless of whether feeders are present or not.

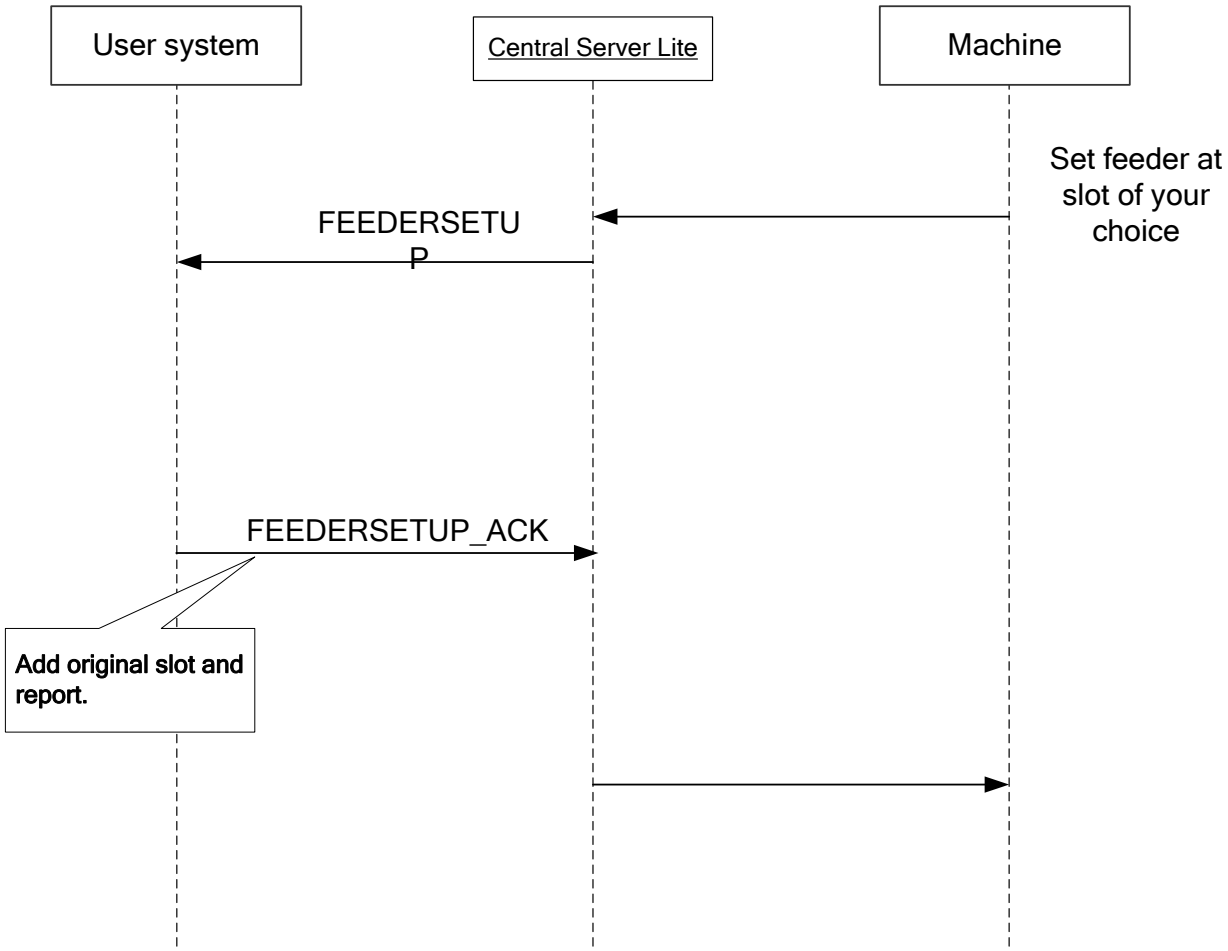
  The definition of parameter "RESULT=1" for the FEEDERSETUP reply event depends on whether this function is enabled or disabled.
    - When this function is disabled, a "NG (reject) verification" is reported to the machine. When it is enabled, a "Not used" status is reported to the machine. In this case, the LED turns off.
    - When this function is enabled, issue a "RESULT=1" FEEDERSETUP reply event only for alternate slots. Do not issue this for original slots.
- Dynamic alternate feeders and splicing cannot be used together at the same time to supply parts at the same module for the same part. Always use the supply method set for the (Supply) parameter in the FEEDERSETUP reply event. If both supply methods are performed at the same time, Central Server Lite reports to the machine that the slot is prohibited for use. Furthermore, an ERRORREPORT event (status=998) is reported to the host computer at this time.
- If there is no alternate related slot, set NextPosNumList=0 but do not define the StageNo or SlotNo.
  (Always do the same when Supply=1)
  Refer to "6.20 Feeder Setup" for details on the FEEDERSETUP event.
- If the host computer reports a FEEDERSETUP with the wrong format, Central Server Lite does not allow the machine to use the slot. Furthermore, the ERRORREPORT even (status=999) is reported as a format error to the host computer at this time.
- Tray parts are not supported by this function. However, when using tray parts at the same time as using this function, the tray FEEDERSETUP reply even must also be changed the same as for feeders.

- Always restart the machine when deleting a single lane job from AB production and producing at one lane only.

Reference: Supply method

No.	Example	Supported	Details
1.	An alternate feeder was set at the next module.	No	Set an alternate feeder at the module specified in the job. If the alternate feeder is set at a different module, it will not be recognized as an alternate feeder.
2.	Parts were supplied by splicing at an alternate slot.	No	Splicing cannot be performed to supply parts to dynamic alternate feeders.
3.	A spliced feeder was set at an alternate slot.	No	Both supply methods cannot be performed at the same time. Set a feeder that has not been spliced at the alternate slot.
4.	A job with the same part set at several slots is being produced. Splicing was performed at these slots.	No	Only dynamic alternate feeders can be supplied for jobs set with the same part at several slots on a single module.
5.	Splicing was used to supply parts to a dynamic alternate feeder.	No	Dynamic alternate feeders cannot be used for parts that are supplied using splicing.
6.	Parts supplied using splicing at the next module are supplied using a dynamic alternate device at this module.	Yes	If the module is different, a different supply method can be used even for the same part. However, this is limited to jobs that place the part at both modules.
7.	Parts supplied using dynamic alternate feeders at the next module are supplied using splicing at this module.	Yes	Same as above.
8.	Feeders supplied using splicing ran out. The feeder was removed and then reinserted. Then dynamic alternate feeders were used.	Yes	When a feeder is re-inserted at a machine, the method can be changed as long as the SETUP reply event parameter Supply=0 (dynamic alternate).
9.	All parts on feeders supplied using dynamic alternate feeders ran out. All of these feeders were removed and then reinserted. Then splicing was used.	Yes	When a feeder is re-inserted at a machine, the method can be changed as long as the SETUP reply event parameter Supply=1 (splicing).
10.	The dynamic alternate function was used with the AVL function.	Yes	These functions can be used together.
11.	A job set with the same part at several slots was produced. The dynamic alternate function and AVL function were used. (This means that several original slots for the same AVL name exist)	Yes with caution	These functions can be used together. However, the following caution applies. The machine recognizes the slots with the same AVL name as dynamic alternate feeders and not part types (CompCode). Check AVL names in Fuji Flexa.

4.2.4 Free allocation

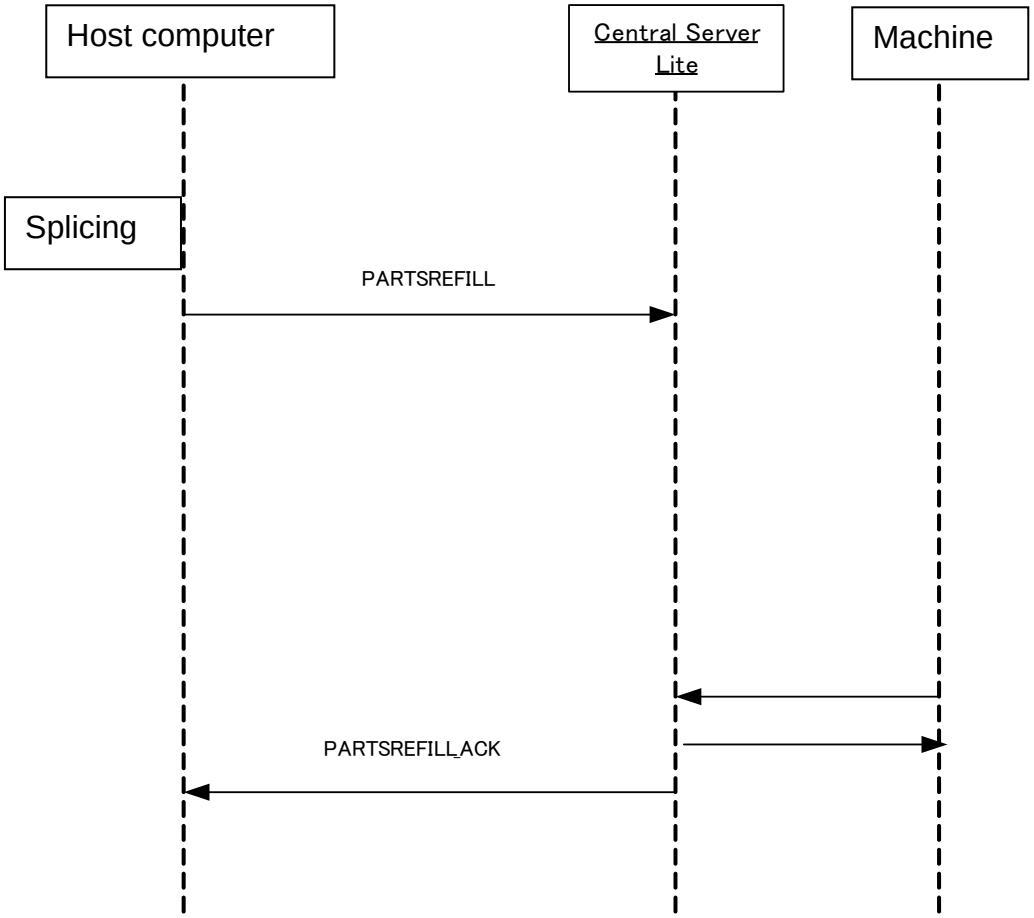


When supplying parts, the operator does not have to be aware of the slots specified in the job. They can set the feeder at any slot as long as it is at the correct module and then production can begin. When feeders are set on the machine, a FEEDERSETUP even is reported to the host computer. The host computer processes the same way as described in "4.2.1. Feeder verification".

- Important points
- This function can be enabled or disabled in KIT Line Configuration Lite. (A separate license is required to use this function).
- Define the original data (*1) parameter in the FEEDERSETUP reply event.
- When parts (feeders) that are not to be used in production are set (when the original data does not exist), set OrignalPosNumList =0 and define StageNo and SlotNo as "0".
- The definition for FEEDERSETUP reply even parameter "RESULT=1" is different. When this function is disabled, a "NG (reject) verification" is reported to the machine. When it is enabled, a "Not used" status is reported to the machine. In this case, the LED turns off.
- The cycle time may increase by a large amount because the part allocation is no longer optimized by Fuji Flexa.
- Dynamic alternate devices cannot be used. Perform splicing to supply parts being used in production.
- Tray parts
- Tray parts are not supported by this function.

(*1) Original data is information for the original slot specified in the job (feeder allocation data) for the part.

4.3 Splicing

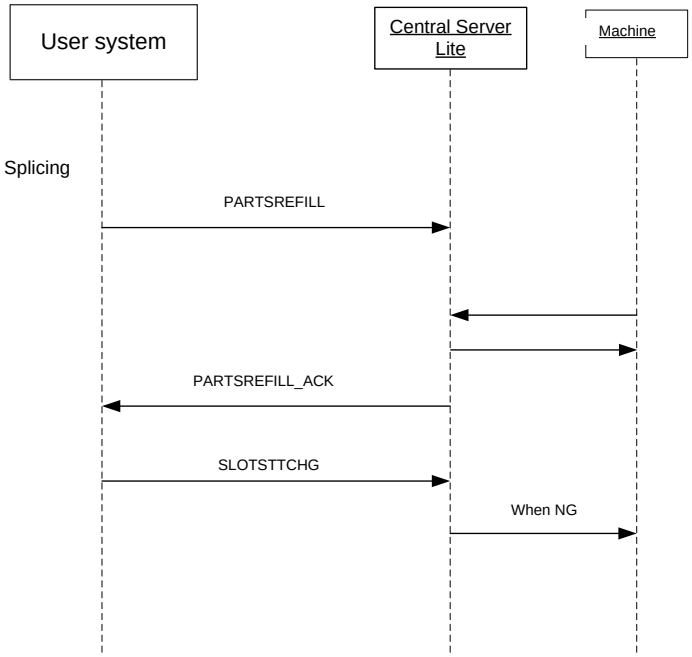


When splicing, a PARTSREFILL event is used.

Refer to "6.32 Parts Resupply Request" for details on the PARTSREFILL event.

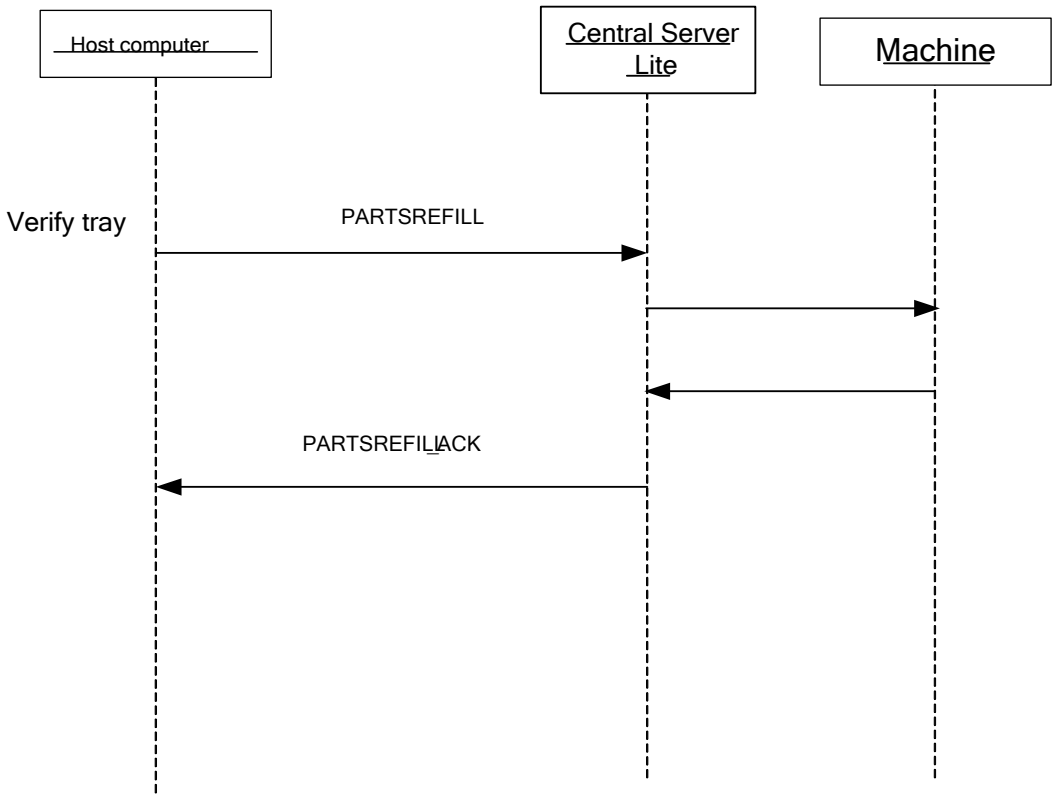
Important points
Perform the first part supply (verification) at the FEEDERSETUP event. PARTSREFILL (splicing) cannot be used.

Splicing error process



A special process is required when an incorrect part is spliced. Since the parts have already been spliced, after issuing a PARTSREFILL event, a NG report is sent to Central Server Lite using a SLOTSTT command. (Sets verification NG (1) at the parameter (STATUS)). No pickup is performed from slots reported as NG in SLOTSTTCHG. (Production can continue by verifying again or splicing).
Refer to "6.19 Change device status command" for details on the SLOTSTTCHG event.

4.4 Tray Verification



Tray verification is performed using the PARTSREFILL event. Since the MTU does not have a device to verify the part, it is not possible to issue a verification request event. After the operator has set a drawer in the MTU, by using a PARTSREFILL event from the host computer, a parts supply complete report (verification) is used.
*When using verification with position checks at the MTU-L and MTU-LT(C), the same event and operation as "4.2.1 Feeder verification" is used and not the PARTSREFILL event. Refer to "6.21 Parts Resupply Request" for details on the PARTSREFILL event.

Important points

When using the PARTSREFILL event and performing tray verification, verification is possible only when the machine is in a changeover state. (When parts must be supplied during production, the machine changes to a changeover state. When the machine is not in a changeover state, Central Server Lite (machine) does not receive the PARTSREFILL event even if it is issued.

Be aware that the slot number and sub-slot number are displayed differently to the machine operation panel.

Tray unit-L (MTU-L)

Slot number is 101 to 142 (sub-slot is always "0") for communication.

Slot=1 SubSlot=1 ⇒ Slot=101 SubSlot=0

Slot=1 SubSlot=2 ⇒ Slot=102 SubSlot=0

Slot=2 SubSlot=1 ⇒ Slot=103 SubSlot=0

Slot=2 SubSlot=2 ⇒ Slot=104 SubSlot=0

:

Tray unit-M Pos: A [MTU-M (A)]

Slot number is 201 to 210 (sub-slot is always "0") for communication.

Slot=1 ⇒ Slot=201 SubSlot=0

Slot=2 ⇒ Slot=202 SubSlot=0

:

Tray unit-M Pos: B [MTU-M (B)]

Slot number is 301 to 310 (sub-slot is always "0") for communication.

Slot=1 ⇒ Slot=301 SubSlot=0

Slot=2 ⇒ Slot=302 SubSlot=0

:

Tray unit-LT Pos: A [MTU-LT (A)]

Slot number is 901 to 924 (sub-slot is always "0") for communication.

Slot=1 SubSlot1 ⇒ Slot=901 SubSlot=0

Slot=1 SubSlot2 ⇒ Slot=902 SubSlot=0

:

Tray unit-LT Pos: B [MTU-LT (B)]

Slot number is 925 to 948 (sub-slot is always "0") for communication.

Slot=1 SubSlot1 ⇒ Slot=925 SubSlot=0

Slot=1 SubSlot2 ⇒ Slot=926 SubSlot=0

Tray unit-LTC Pos: A [MTU-LTC (A)]

Slot number is 1001 to 1012 (sub-slot is always "0") for communication.

Slot=1 ⇒ Slot=1001 SubSlot=0

Slot=2 ⇒ Slot=1002 SubSlot=0

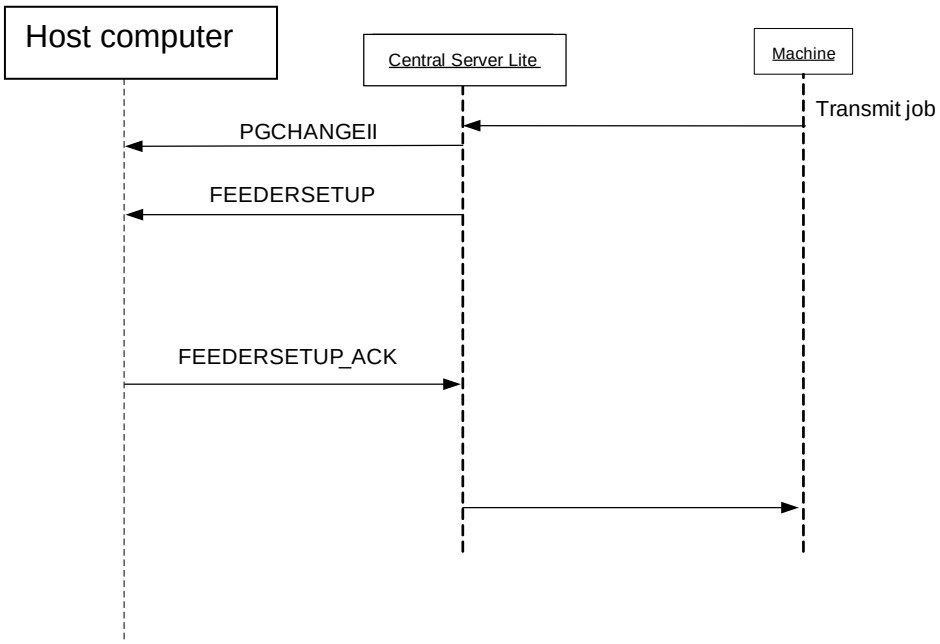
Tray unit-LTC Pos: B [MTU-LTC (B)]

Slot number is 1013 to 1024 (sub-slot is always "0") for communication.

Slot=1 ⇒ Slot=1013 SubSlot=0

Slot=2 ⇒ Slot=1014 SubSlot=0

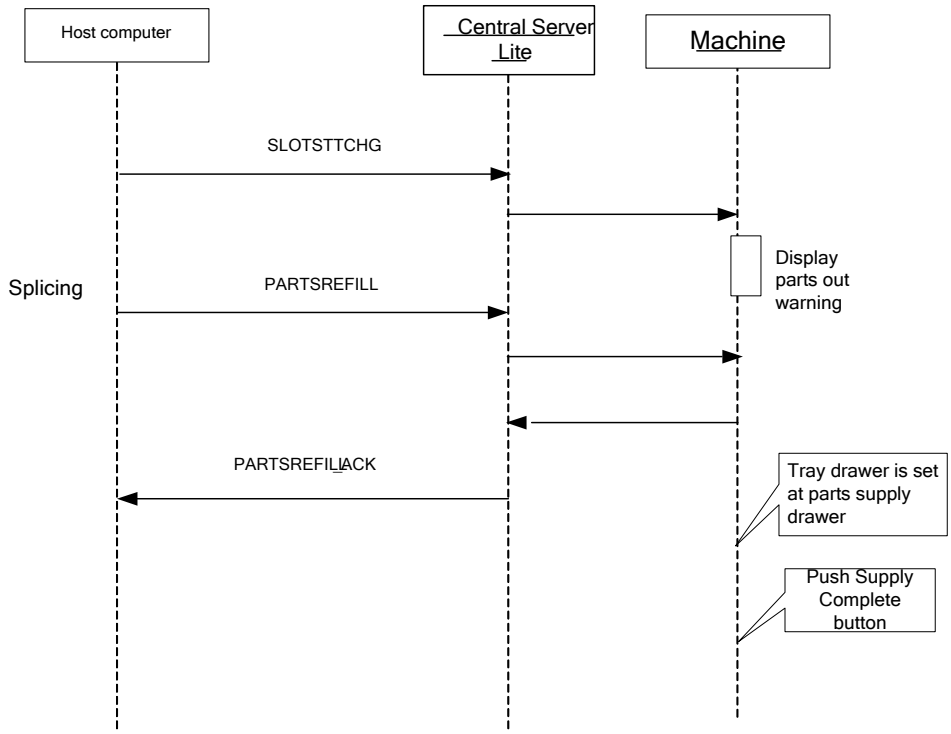
4.4.1 Verification when transmitting jobs (tray parts)



When transmitting jobs to the machine during tray verification, a FEEDERSETUP event is reported, the same as the feeder, only when the job is transmitted. Processing this event allows the host computer to again determine tray parts currently set at the machine when the job is transmitted. Therefore, the host computer must process this event the same as "Feeder verification".
Refer to "6.20 Feeder Setup" for details on the FEEDERSETUP event.

Important points
The FEEDERSETUP event for tray parts (with position checks excluded) is reported only when jobs are transmitted. Verification OK cannot be used during this process for the slot with the error status before the job is sent. Example: The host computer reports a SETUP reply event for verification OK but the slot continues to show an error status. In this case, use a PARTSREFILL event as usual after starting production.

4.4.2 Non-stop parts supply function (tray unit-L)

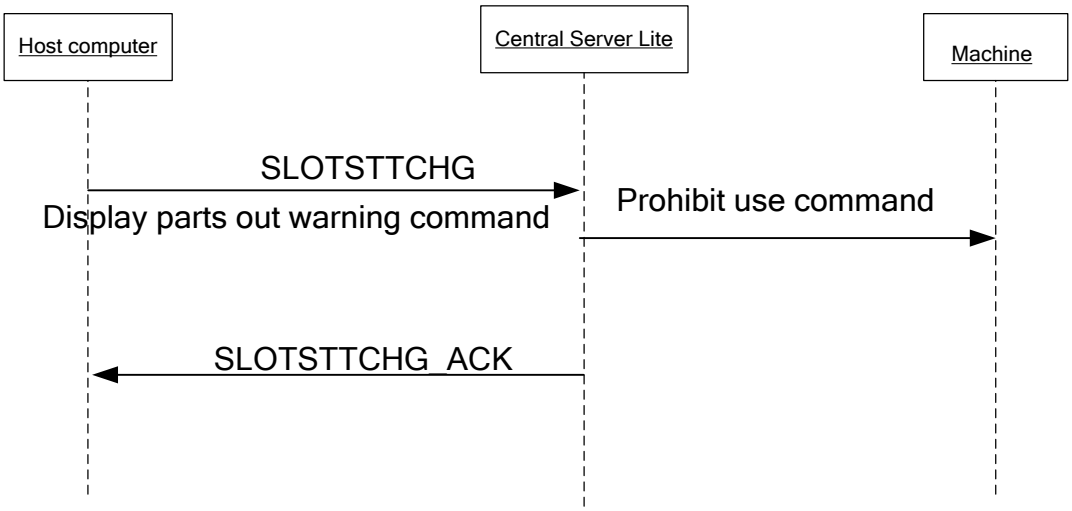


The non-stop parts supply function allows parts to be supplied without stopping production using the parts supply drawer on the tray unit-L.
When the parts out warning screen displays at the machine operation panel, send a PARTSREFILL event from the user's system to Central Server Lite. Then set the tray drawer in the parts supply drawer and push the [Supply Complete] (supply complete) button.
Refer to "Parts out warning display" for the method in which parts out warnings are reported.

Important points
After setting tray parts at the parts supply drawer, always enter the slot number used in production for the issued PARTSREFILL event. (Do not use slot number 21 "141 or 142") When the parts out warning screen displays at the machine operation panel, send a PARTSREFILL event. When using alternate trays, always set them in the same drawer. When using alternate trays, send the parts out (SLOTSTTCHG) event to both the original and alternate tray. If the parts out event is only sent to one of the trays, the parts out warning does not display at the machine operation panel. Perform the following settings in Accessory Software. Select [Tray verification ON] for the [Machine Configuration] – [Fujitrax setting] - [Tray unit-L verification ON/OFF] setting in Accessory Software. Select [Front door supply/non-stop tray resupply] for the [Machine Configuration] – [Tray unit-L settings] – [Tray unit-L resupply] setting in Accessory Software. Select [Parts out] for the [Machine Configuration] – [Alternate tray change condition setting] – [Alternate tray change condition] setting in Accessory Software. (When using alternate trays)

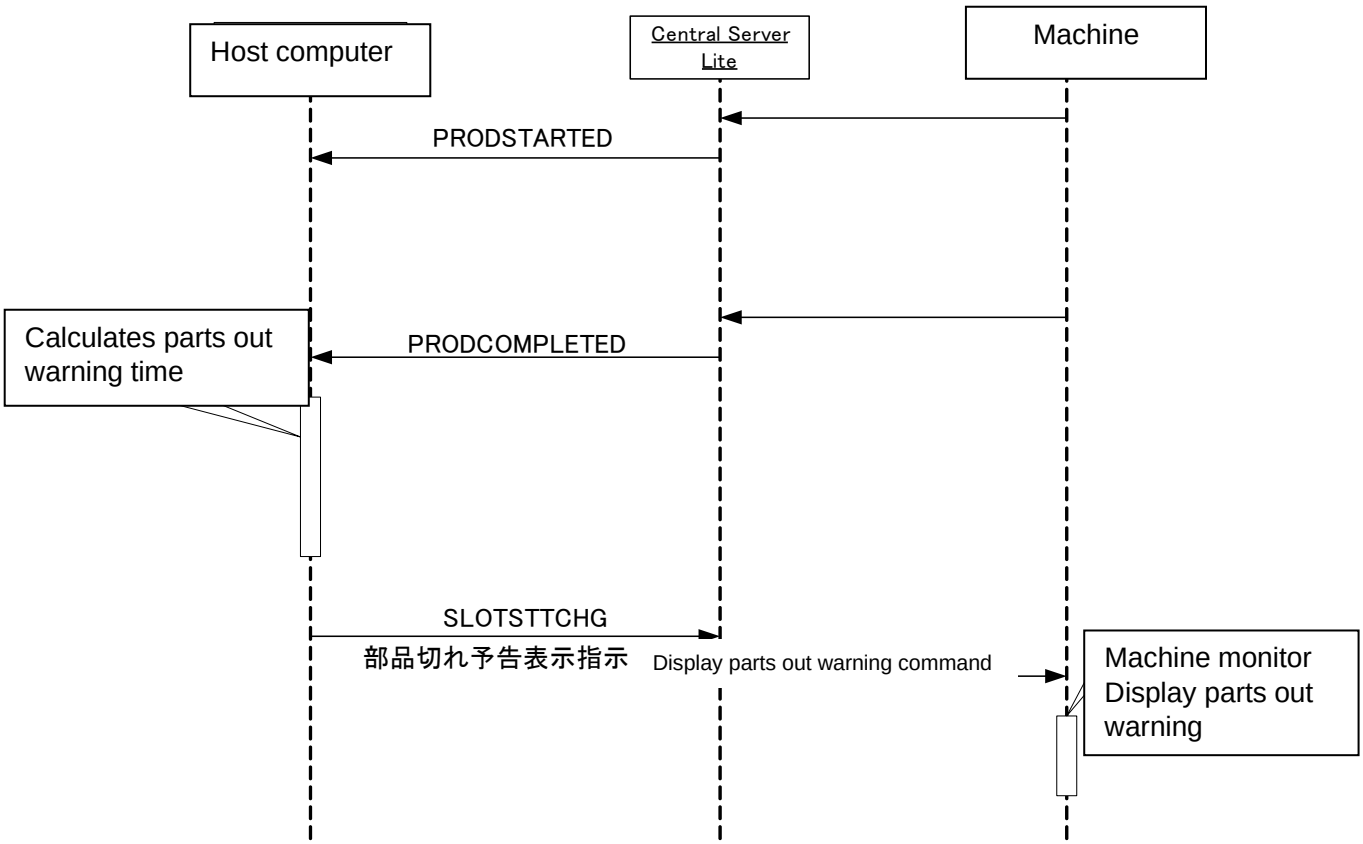
4.5 Parts Status Change Process

4.5.1 Prohibiting parts usage



During production, when wanting to change the status (prohibit use) for a slot that has completed verification (feeder or tray part), SLOTSTTCHG is used. Refer to "6.19 Change device status command" for details on the SLOTSTTCHG event.

4.5.2 Displaying parts out warnings



When wanting to display parts out warnings at the machine monitor, use SLOTSTTCHG. Set required parameters for the host computer such as the feeder position, parts out warning time and parts out warning display status and then report SLOTSTTCHG to Central Server Lite. This causes the parts out warning time to display at the machine monitor.

Important points

- The host computer can display parts out warnings at the monitor at a time defined by the user. (SLOTSTTCHG events can be reported at a time defined by the user.) The above diagram shows SLOTSTTCHG being reported after PRODFINISH but it is not limited to this time. However, parts out warnings display at the machine monitor only during automatic operation. (Warnings display after automatic operation is started for times in which reports are sent other than during machine operation).
- When SLOTSTTCHG is reported because the host computer displays parts out warnings, always set the parts out warning time in the parameter.
- Do not report SLOTSTTCHG for slots not used in production or slots not set with a feeder at the host computer.
- Error information is prioritized and displayed at the machine monitor. Do not report SLOTSTTCHG for slots with an error status (recovery limit, vision processing, etc) at the host computer.
- When removing or inserting feeders, the parts out warning time is reset. Report a parts out warning (SLOTSTTCHG event) again later the feeder has been set on the machine if you want it to be displayed again.
- When using alternate trays for tray parts, report a parts out warning (SLOTSTTCHG event) to both the original and alternate tray. The parts out warning does not display at the machine if only one of the trays receives the report. (Tray Unit L Alternate tray change condition Only)
- For the XPF, only the parts out warning displays at the monitor and not the warning time.

5 Open Interface and Central Server Lite Event Compatibility Table

Open Interface and Central Server Lite event compatibility is shown below.

No.	Type	Function	Open Interface	Central Server Lite
1	Connection check	Checks connection	TRXKEEPALIVE	KEEPALIVE
2	Data output	Outputs feeder allocation in job (current production)	FEEDERLIST	PGCHANGEII + BOMLIST
3	Data output	Outputs feeder allocation in job (changeover)	FEEDERLIST	FEEDERLIST
4	Data output	Production data (realtime production start report)	PRODSTART	PRODSTARTED
5	Data output	Production data (realtime production end report)	PRODFINSH	PRODCOMPLETEDII + HEADUSAGE + PARTSUSAGE + HOLDERERR
6	Data output	Production data (realtime machine status report)	MCSTATUS	MCSTATECHANGE
7	Data output	Production data (realtime job changeover report)	CHANGERECIPE	PGCHANGEII
8	Data output	Production data (machine error occurrence report)	ALARMOCCUR	MCALARMON
9	Data output	Production data (machine error clearance report)	ALARMRESET	MCALARMOFF
10	Data output	Nozzle quantity used report	NOZZLEINFO	NOZZLEUSAGE
11	Data output	Parts out report (recovery limit)	NOPARTS	ERRORREPORT
12	Data output	Head data report	UNITPOS	Can be acquired with HEADUSAGE
13	Data output	Nozzle data report	UNITPOS	Can be acquired with NOZZLEUSAGE
14	Command	Command to deny usage	MODULESTT SLOTSTT	SLOTSTTCHG
15	Command	Command to display parts out warning	SLOTSTT	SLOTSTTCHG
16	Verify	Feeder set	SETUP(SETUP2)	FEEDERSETUP
17	Verify	Feeder set	SETUP(SETUP2)	FEEDERSETUP
18	Verify	Tray verification	REFILL	PARTSREFILL
19	Verify	Feeder removal	REMOVE	UNLOADCOMP
20	Verify	Splicing parts supply	REFILL	PARTSREFILL
21	Data output	Parts change report	NEXTPARTS	CHANGECOMP UNLOADCOMP
22	Setting acquisition	Tray verification setting	SETTING	X
23	Setting acquisition	Machine line configuration	TrxMcList	X

6 Event Message Specification

6.1 Message Format Rules

At the front of event messages, it is a rule that the transmission data size is set in four byte binary code.

Transmission data size = 1byte(STX) + the total size of the event message data + 1byte(ETX) (Big Endian order)

Details regarding event messages are described below. In these cases, data transmission size, STX and ETX are omitted.

6.2 numbers and part supply units

6.2.1 Module

Shown below are the module numbers reported from the Machine.

Machine	Module number
NXT	1～ 32
AIM	1～ 2
AIMEX	1～ 24
XPF	1
NXTR	1~48

6.2.2 Stage

Shown below are the stage numbers reported from the Machine.

Machine	Stage number
NXT	1
AIM	1～ 2
AIMEX	1～ 2
XPF (MFU-30/MFU-40)	1～ 2
(MTU-A：Feeder)	3
(MTU-A：Tray)	2
(BTU-A/OTS)	2
(ITS)	4
NXTR	1~2

6.2.3 Slot

Shown below are the slot numbers reported from the NXT/AIM/AIMEX and the various part supply units.

NXT/AIM/AIMEX

Part supply unit	Slot number range
Feeder	1 ~ 99 Hexa-feeder is Above + Subslot No*10000 *3
Tray-L	101 ~ 199 *1
Tray-MA	201 ~ 299
Tray-MB	301 ~ 399
Tray Feeder-MA	401 ~ 499 *2
Tray Feeder-MB	501 ~ 599 *2
Tray Feeder-MC	601 ~ 699 *2
Tray Feeder-MD	1301 ~ 1399 *2
Tray Feeder-LA	701 ~ 799 *2
Tray Feeder-LB	801 ~ 899 *2
Tray Feeder-LC	1401 ~ 1499 *2
Tray unit-LTA	901 ~ 924
Tray unit-LTB	925 ~ 948
Tray unit-LTCA	1001 ~ 1012 *2
Tray unit-LTCB	1013 ~ 1024 *2

*1 AIMEX not supported
*2 AIM, AIMEX not supported
*3 AIM does not support hexa-feeder

XPF

Part supply unit	Slot number range
FU-30E	1001~1050
MTU-A Tray	2001~2092 (Stage:2)
MTU-A Feeder	2001~2020 (Stage:3)
MTU-B	3001~3092
BTU-A	4001~4068
OTS	7001~7058
ITS	8001~8058
MTU-40E	9001~9064

NXTR

Part supply unit	Slot number range
Feeder	1~99
TU-RMA	901~924
TU-RMB	925~948

6.3 NoRead panel ID format

Previously, a panel ID "NOREAD***" was also issued for causes other than a panel ID reading failure. However, the panel ID format has changed for causes other than a panel ID reading failure.

Reason	Panel ID format
Panel ID could not be read by FLP	(Previously) NOREAD_FN_camera ID_YYYYMMDDHHMMSS_sequential no (New) no change
Panel ID could not be read by machine	(Previously) NOREAD_MN_machine ID_YYYYMMDDHHMMSS (New) no change
Manual panel entry	(Previously) NOREAD_MI_machine ID_module no_lane_YYYYMMDDHHMMSS (New) MANUAL INSERT_ machine ID_module no_lane_YYYYMMDDHHMMSS
FLP sensor error	(Previously) NOREAD_Q0_machine ID_module no_lane_YYYYMMDDHHMMSS (New) FLP_ machine ID_module no_lane_YYYYMMDDHHMMSS

* If Profiler is enabled or disabled while there is a panel inside the machine, a panel ID "NOREAD_MP_machine ID_module no_lane_YYYYMMDDHHMMSS" is issued, as previously.

6.4 Prohibited characters for panel IDs

In the course of operating the host interface, the following restrictions apply to panel IDs read by the system.

1. Characters that cannot be used for panel IDs
The following 11 characters are restricted by the system: ", ', \, *, ?, &, <, >, |, : and /.

2. Length of panel IDs
The system does not support strings greater than 64 characters.

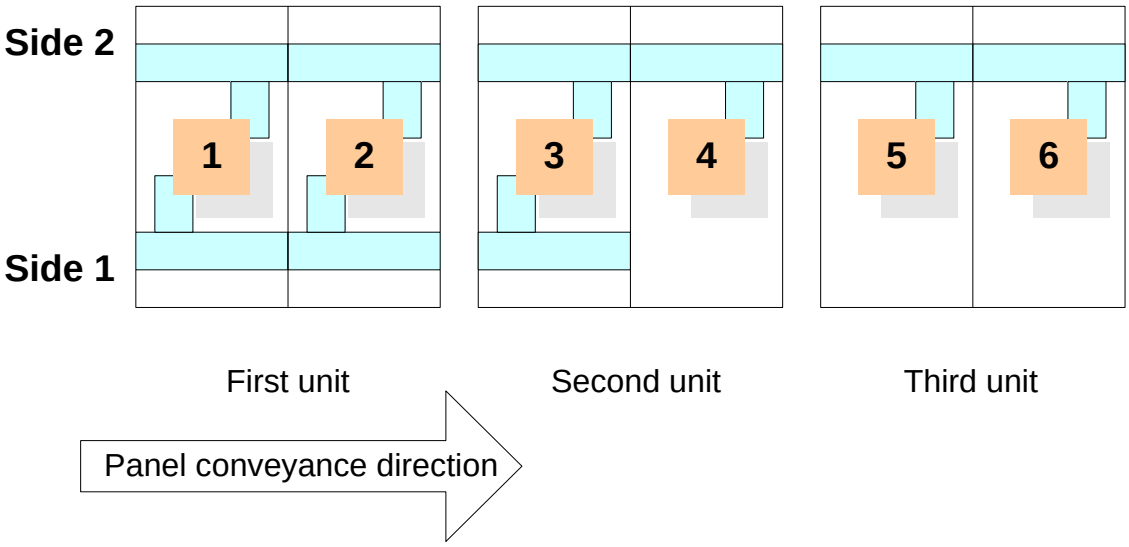
6.5 AIMEX module numbers

The treatment of module numbers for the AIMEX has been changed. However, Host Interface still uses robot numbers instead of the module numbers (no change from V1.30).

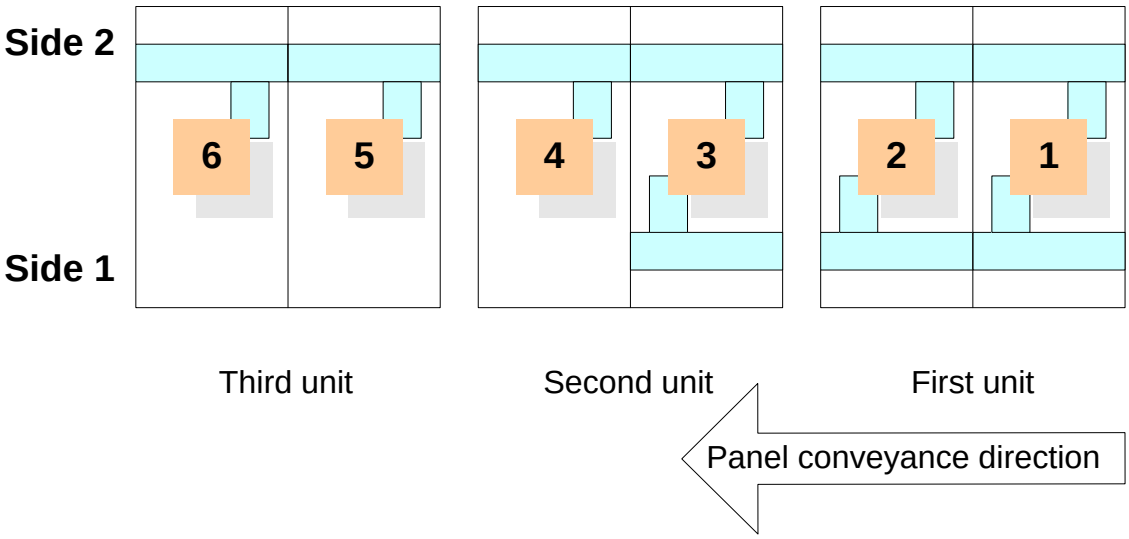
The following pages have examples of how the module numbers are treated in the machine display and Host Interface. If necessary, perform conversion processing at the host computer.

Display on machine (module number)

Standard flow

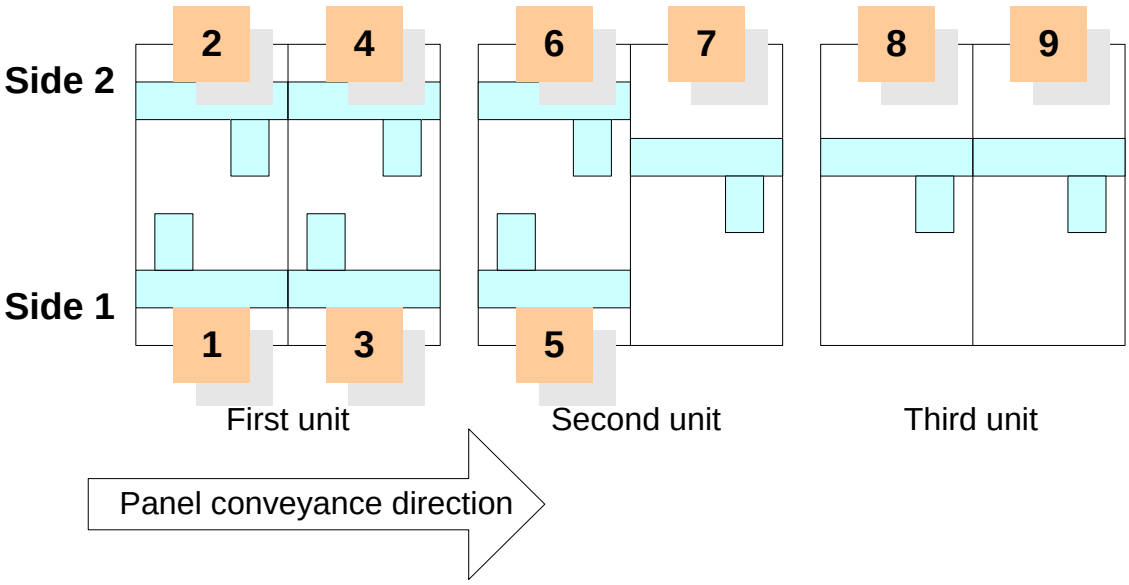


Reverse flow

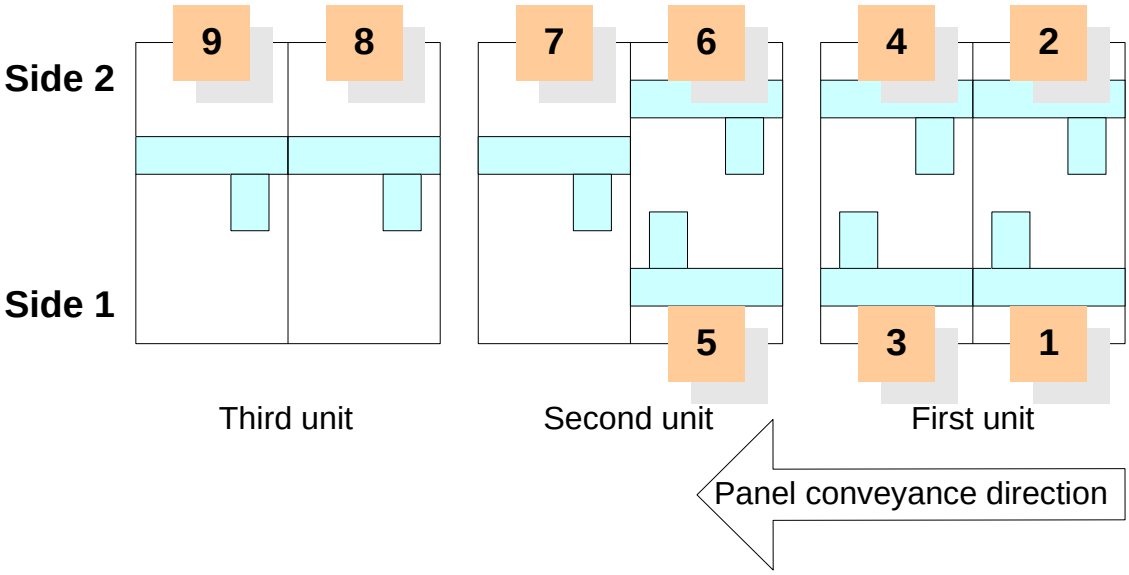


Module number (robot number) treatment at Host Interface

Standard flow



Reverse flow



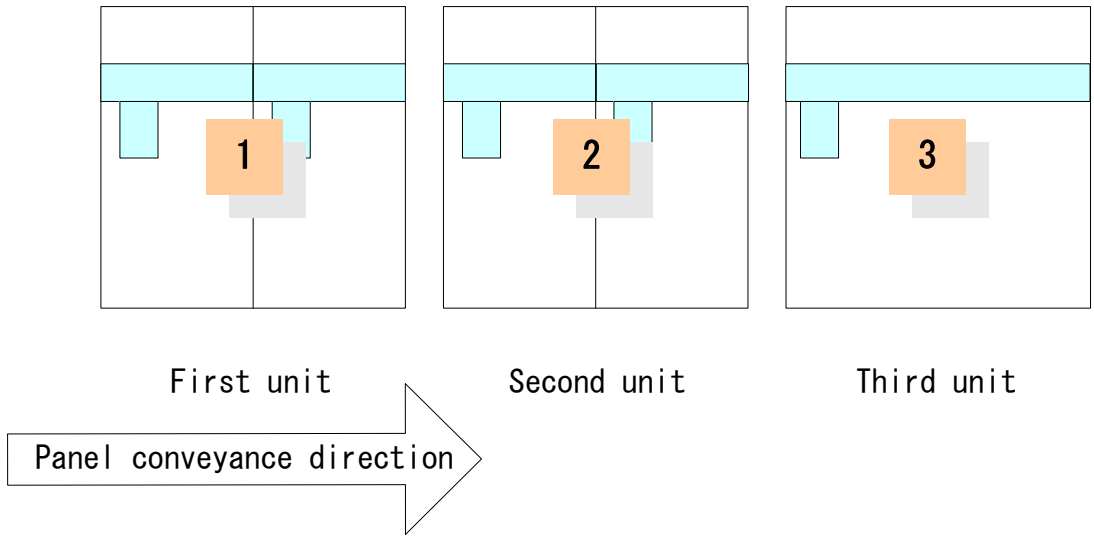
6.6 NXTR momule numbers

Like AIMEX, NXTR treats the robot number as a module number for the Host Interface.

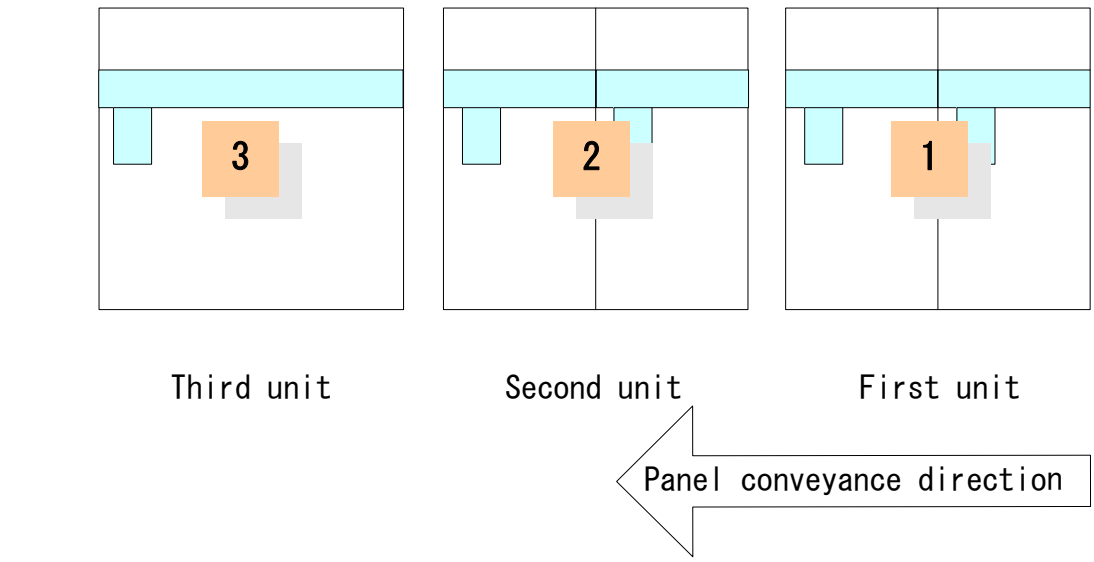
The following pages have examples of how the module numbers are treated in the machine display and Host Interface. If necessary, perform conversion processing at the host computer.

Display on machine (module number)

Standard flow

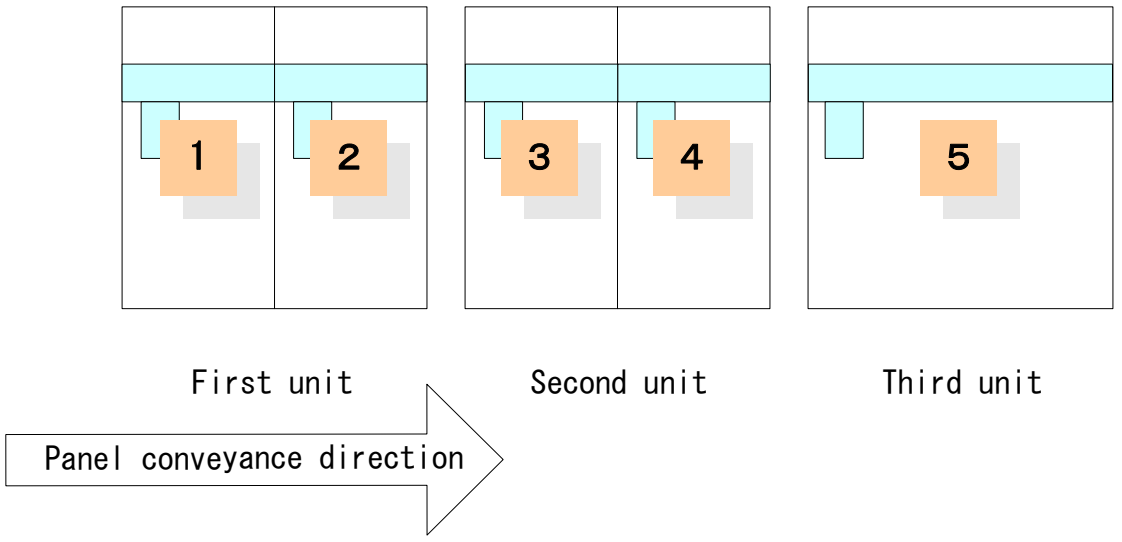


Reverse flow

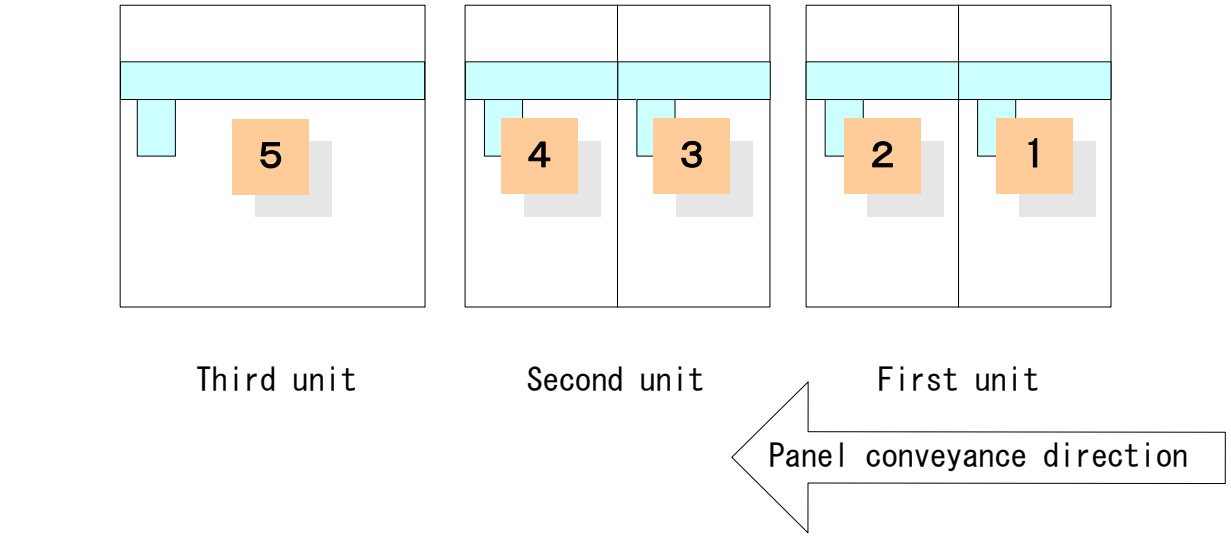


Module number (robot number) treatment at Host Interface

Standard flow

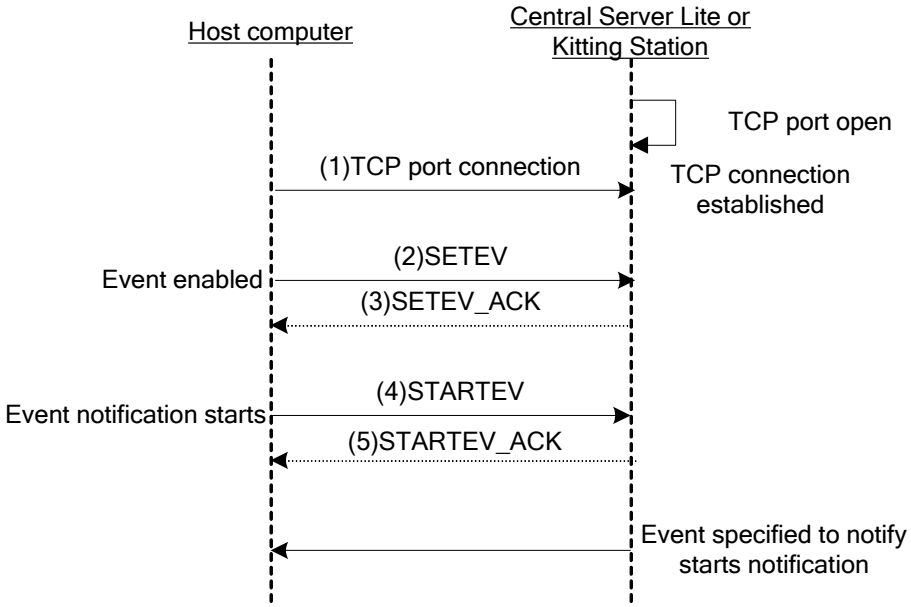


Reverse flow



6.7 Initial Process

In order to communicate with the Central Server Lite, the company host computer must have the necessary initial processes, as described below



(1) The company host computer connects with the designated Central Server Lite TCP board [default 30040] when it is started.
(2) The company host computer transmits valid event specifications (SETEV) to the Central Server Lite.
(3) The company host computer receives a valid event specification reply (SETEV_ACK)) from the Central Server Lite.
(4) The company host computer transmits a notice commencement (STARTEV) to the Central Server Lite.
(5) The company host computer receives a notice commencement reply (SETEV_ACK)) from the Central Server Lite. If the correct reply is received, an event report from the Central Server Lite is started

6.7.1 Valid event setting notification (SETEV)

Trigger	When the company host computer specifies an event as valid.	
Direction	Host computer -> Central Server Lite	
Event Message Format	STX**SETEV**TabSeqIDTabMachineNameTab**<SetEvent>**	
<SetEvent> format	NumListCR EventNameTabAckCR : EventNameTabAckCR ETX	
Date item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	MachineName	The device that validated the event. If this is blank, the Central Server Lite selects all of the machines.
	NumList	The number of data records below.
	EventName	The event validated. The ACK event name cannot be set. Refer to [3. Event Message List] for event names that can be specified.
	ACK	Specify valid event reply (ACK). 0: No ACK 1:ACK

When multiple machines are specified, it is necessary to issue SETEV to multiple machines.

6.7.2 Valid event setting notification reply (SETEV_ACK)

Trigger	When the Central Server Lite receives a valid setting notification (SETEV) from the host computer.	
Direction	Central Server Lite -> Host computer	
Event Message Format	STX**SETEV_ACK**TabSeqIDTabMachineNameTabResultETX	
Date item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	MachineName	The device that validated the event. Echoes back the value from the request side.
	Result	Result 0: OK 1: NG

6.7.3 Event notice commencement notification (STARTEV)

Trigger	When an event notice is commenced at the host computer by the Central Server Lite.	
Direction	Host computer -> Central Server Lite	
Event Message Format	STX**STARTEV**TabSeqIDTabMachineNameETX	
Date item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	MachineName	The name of the machine that started the event transmission. If it is left blank, the Central Server Lite selects all machines.

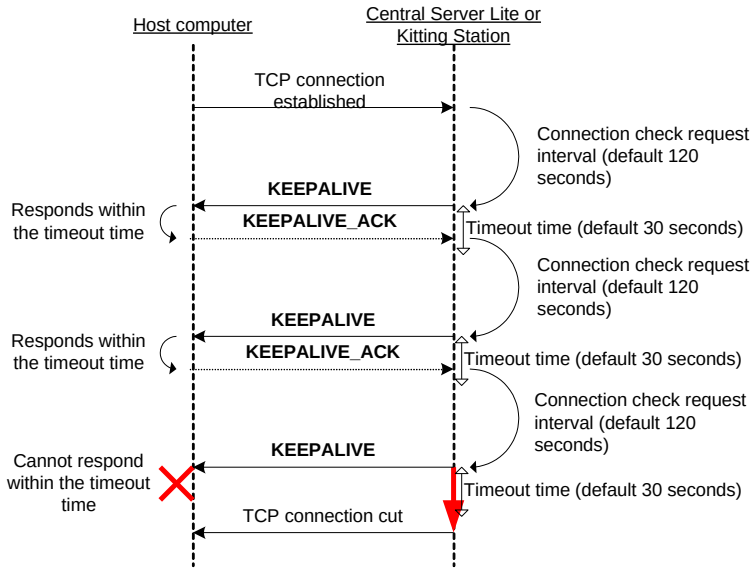
When multiple machines begin an event notice, it is necessary to issue SETEV to multiple machines.

6.7.4 Event notice commencement notification reply (STARTEV_ACK)

Trigger	When the Central Server Lite receives an event notice commencement notification from the host computer.	
Direction	Central Server Lite ->Host computer	
Event Message Format	STX**STARTEV_ACK**TabSeqIDTabMachineNameTabResultETX	
Date item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	MachineName	The name of the machine that started the event transmission. Echoes back the value from the request side.
	Result	Result 0: OK 1: NG

6.8 Connection Check

The Central Server Lite performs a connection check event (KEEPALIVE) with the host computer.
The Central Server Lite issues a connection check request (KEEPALIVE) to the host computer at regular intervals (default: 120 seconds).
If the Central Server Lite does not receive a connection check request reply (KEEPALIVE_ACK) from the host computer at regular intervals (default: 30 seconds), is disconnects the TCP connection.
.



6.8.1 Connection check request (KEEPALIVE)

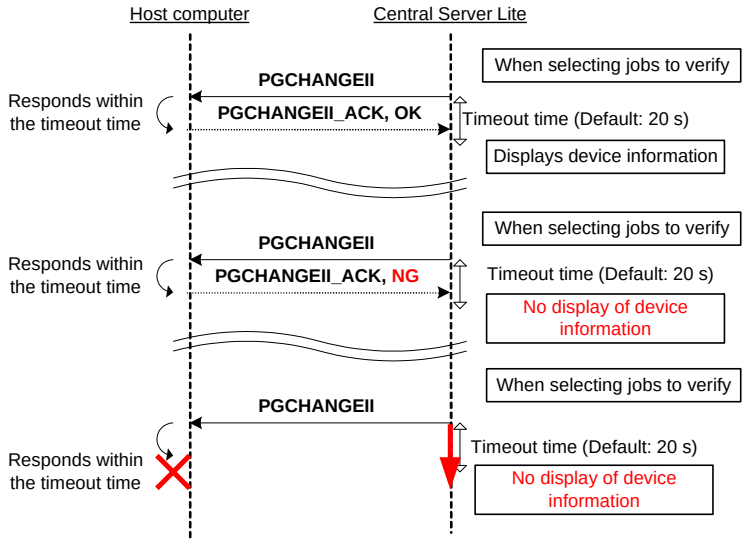
Trigger	Regular intervals	
Direction	Central Server Lite -> Host computer	
Event Message Format	STX**KEEPALIVE**TabSeqIDETX	
Data Item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.

6.8.2 Connection check request reply (KEEPALIVE_ACK)

Trigger	Regular intervals	
Direction	Host computer -> Central Server Lite	
Event Message Format	STX**KEEPALIVE_ACK**TabSeqIDETX	
Data Item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.

6.9 Program Change Completion 2

When jobs are selected for verification at Central Server Lite, the report is sent.



6.9.1 Program change completion report 2 (PGCHANGEII)

Sends job data acquired from Fuji Flexa.

Trigger	When it is necessary to send job data from Fuji Flexa	
Direction	Central Server Lite -> Host computer	
Event message format	STX**PGCHANGEII**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabLaneNoTabProgramNameTab**<UsedPG>**ETX	
<UsedPG> format	NumListCR StageNoTabSlotNoTab**< UsedPART >** : : StageNoTabSlotNoTab**< UsedPART >**	
<UsedPART > format	NumListCR PartNoCR : PartNo CR	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echo-backs this value. When the maximum value is reached, the count returns to 1.
	Time	Time at which even occurred (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	LaneNo	Conveyor name 1: Front side 2: Rear side
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier: Top: "_T" Bottom: "_B"
	NumList	The data record quantity below.
	StageNo	Stage number (Refer to section 6.2)
	SlotNo	Slot number (Refer to section 6.2)
	NumList	The data record quantity below.
	PartNo	Part Barcode Label

6.9.2 Program change program completion report 2 reply (PGCHANGEII_ACK)

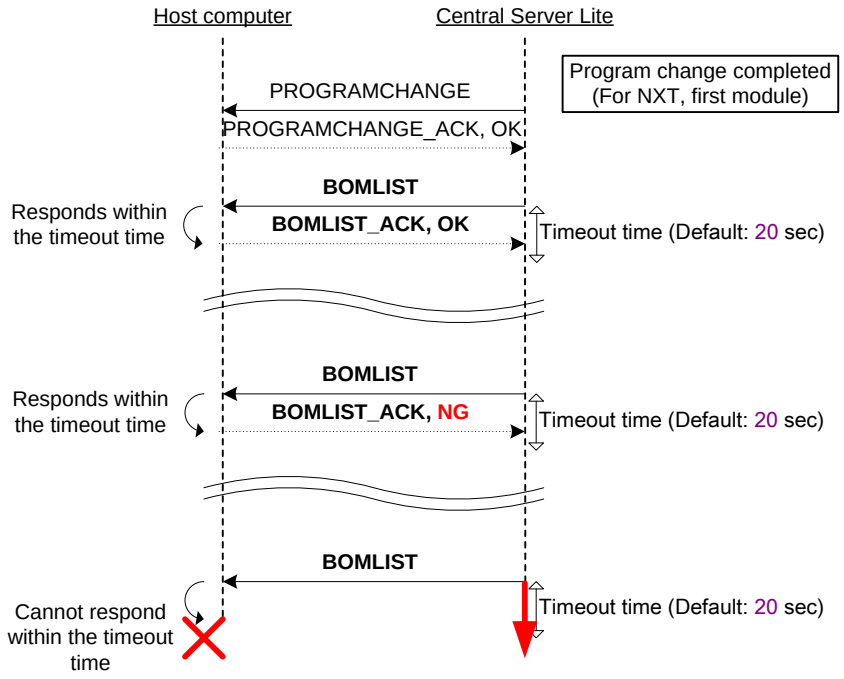
After Central Server Lite sends the program change completion report (PGCHANGEII) event to the host computer, it waits for a reply message from the host computer.

Trigger	When the host computer receives the program change completion report (PGCHANGEII) (For the NXT, each module)	
Direction	Host computer -> Central Server Lite	
Event message format	STX**PGCHANGEII_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoTabLaneNoTabProgramNameETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echo-backs this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0:OK 1:NG
	MachineName	Machine name Echoes back the value for the requesting side.
	ModuleNo	Module number (Refer to section 6.2)
	LaneNo	Conveyor name 1: Front side 2: Rear side Echoes back the value for the requesting side.
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier: Top: "_T" Bottom: "_B" Echoes back the value for the requesting side.

6.10 BOM List Data Notification

The sequence and message format used when sending BOM list data notifications following completion of program changing at the first module are described below.

Also, even if the BOM list notification reply (BOMLIST_ACK) is NG, or it timeouts with this sequence, Central Server Lite subsequently processes this reply (BOMLIST_ACK) in the same manner as if it received an "OK" result.



6.10.1BOM list notification (BOMLIST)

When Central Server Lite receives a correct reply from the host computer for the program change notification reply (PROGRAMCHANGE_ACK), Central Server Lite then immediately sends a BOM list notification (BOMLIST) to the host computer.
In the case of the NXT, the notification is sent immediately after receiving a correct reply for the program change notification reply (PGCHANGEII_ACK) from the first module.

Trigger	Immediately following completion of program change at the machine (or first module in the case of the NXT)	
Direction	Central Server Lite -> Host computer	
Event message format	STX**BOMLIST**TabSeqIDTabTimeTabLineNameTabMachineNameTabLaneNoTabProgram NameTab**<UsedBOM>**	
<UsedBOM> format	NumListCR BlockNoTabPartNoTabReferenceCR : BlockNoTabPartNoTabReferenceCR ETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	Time at which event occurred (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	LaneNo	Conveyor name 1: Front side 2: Rear side
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B"
	NumList	Number of data records
	BlockNo	Block number (1~1000)
	PartNo	Part number (It is not a Barcode Label.)
	Reference	Reference designator

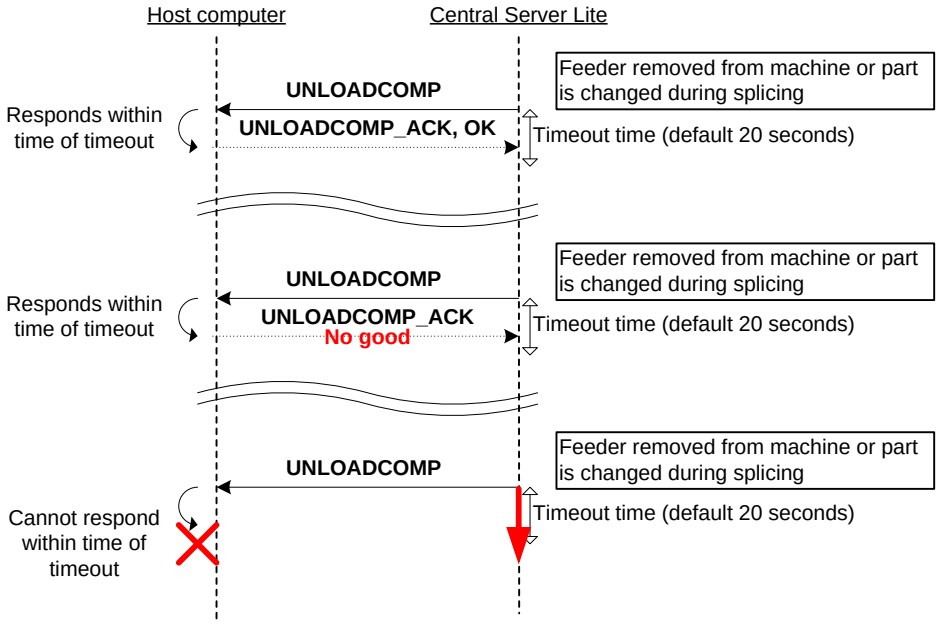
6.10.2BOM list notification reply (BOMLIST_ACK)

After Central Server Lite has sent a part list notification (BOMLIST) event to the host computer, it waits for the reply message from the host computer.

Trigger	When the host computer receives a part list notification (BOMLIST).	
Direction	Host computer -> Central Server Lite	
Event message format	STX**BOMLIST_ACK**TabSeqIDTabResultTabMachineNameTabLaneNoTabProgramNameETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0: OK 1: NG
	MachineName	Machine name Echoes back the value for the requesting side.
	LaneNo	Conveyor name 1: Front side 2: Rear side Echoes back the value for the requesting side.
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B" Echoes back the value for the requesting side.

6.11 Parts Removal

The following sequence and message format describes when a feeder is removed from the machine, and when switching from parts used prior to splicing to the next part type.
Also, even if the parts removal notification (UNLOADCOMP_ACK) is NG, or it timeouts with this sequence, the event occurs when a feeder is removed from the machine, and when switching from parts used prior to splicing to the next part type.



6.11.1Parts Removal Notification (UNLOADCOMP)

This event occurs when a feeder is removed from the machine, and when switching from parts used prior to splicing to the next part type.

Trigger	When a feeder is removed from the machine. When existing parts are switched to new parts following splicing.	
Event Message Format	STX **UNLOADCOMP** Tab SeqID Tab Time Tab LineName Tab MachineName Tab ModuleNo Tab **<UNLOADCOMPONENT>**	
<LOADCOMPONENT> Format	NumList CR StageNo Tab SlotNo Tab PartNo Tab FeederID Tab ReelID Tab Quantity Tab RemainingTime CR : StageNo Tab SlotNo Tab PartNo Tab FeederID Tab ReelID Tab Quantity Tab RemainingTime CR ETX	
Data Item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	Event Date (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	NumList	Number of data records below
	StageNo	Stage number (Refer to section 6.2)
	SlotNo	Slot number (Refer to section 6.2)
	PartNo	Part Barcode Label
	FeederID	Feeder ID (Unique ID)
	ReelID	Reel ID (Unique ID) *Remove Feeder is "Null" fixation. *Reel ID for old parts when performing splicing.
	Quantity	Current remaining parts *Fixed at "0" * Remaining parts count for old reel when performing splicing.
	RemainingTime	Floor life remaining time (0~999999) *Fixed at "0" Units: minutes

If parts supply notification (UNLOADCOMP) events occur simultaneously for multiple slots at the same module, in <UNLOADCOMPONENT>, one record per slot is set for the polynomial data, with the number of records set in the program equal to the number of slots required.

6.11.2Parts Removal Notification Reply (UNLOADCOMP_ACK)

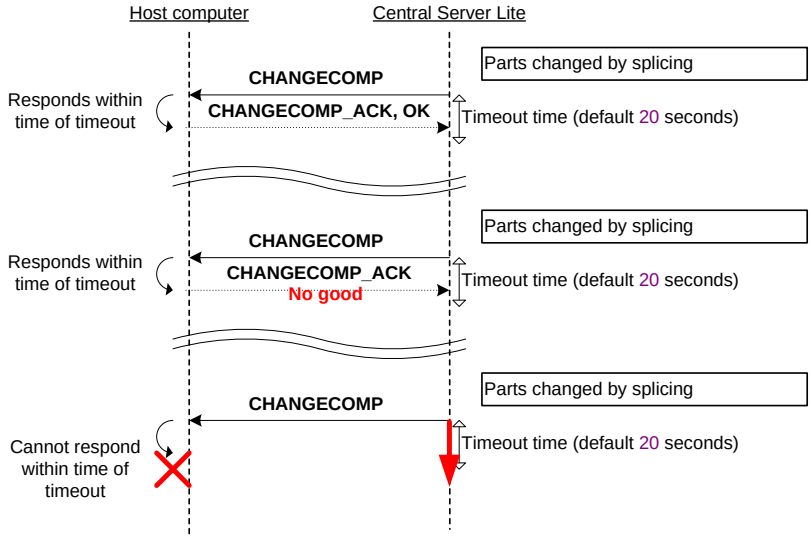
Trigger	When a feeder is removed from the machine. When existing parts are switched to new parts following splicing.	
Direction	Host computer -> Central Server Lite	
Event Message Format	STX**UNLOADCOMP_ACK**TabSeqIDTabMachineNameTabModuleNoTab**<UNLOADCOMPONENT_ACK>**	
<UNLOADCOMPONENT_ACK> Format	NumListCR StageNoTabSlotNoTabResultTabPartNoTabFeederIDTabReelIDTabRemainingTimeCR : StageNoTabSlotNoTabResultTabPartNoTabFeederIDTabReelIDTabRemainingTimeCR ETX	
Data Item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	MachineName	Machine name Echoes back the value from the request side.
	ModuleNo	Module number (Refer to section 6.2) Echoes back the value from the request side.
	NumList	Number of data records below
	StageNo	Stage number (Refer to section 6.2) Echoes back the value from the request side.
	SlotNo	Slot number (Refer to section 6.2) Echoes back the value from the request side.
	Result	Result 0: OK 1: NG
	PartNo	Part Barcode Label Echoes back the value from the request side.
	FeederID	Feeder ID (Unique ID) Echoes back the value from the request side.
	ReelID	Reel ID (Unique ID) Echoes back the value from the request side.
	RemainingTime	Floor life remaining time (0~999999) Units: minutes

If parts supply notification (UNLOADCOMP_ACK) events occur simultaneously for multiple slots at the same module, in <UNLOADCOMPONENT_ACK >, one record per slot is set for the polynomial data, with the number of records set in the program equal to the number of slots required.

6.12 Changing Parts

Shown below is the sequence and message format when the part is changed to a new part during splicing.

Splicing is still performed for changed parts even when a timeout occurs or the part change notification (CHANGECOMP_ACK) is no good for this sequence.



6.12.1 Part Change Notification (CHANGECOMP)

When the part is changed to a new part during splicing, this event occurs.

Trigger	Change to a new part during splicing	
Direction	Central Server Lite -> Host computer	
Event Message Format	STX **CHANGECOMP** Tab SeqID Tab Time Tab LineName Tab MachineName Tab ModuleNo Tab **<CHANGECOMPONENT>**	
<CHANGECOMPONENT> Format	NumList CR StageNo Tab SlotNo Tab PartNo Tab FeederID Tab ReelID Tab Quantity CR : StageNo Tab SlotNo Tab PartNo Tab FeederID Tab ReelID Tab Quantity CR ETX	
Data Item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	Date event occurred (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	NumList	The data record quantity below
	StageNo	Stage number (Refer to section 6.2)
	SlotNo	Slot number (Refer to section 6.2)
	PartNo	Part Barcode Label
	FeederID	Feeder ID (unique ID)
	ReelID	The reel ID of the next reel (unique ID)
	Quantity	The number of parts on the next reel

When the trigger for the part change notification (CHANGECOMP) occurs at several slots on the same module at the same time, a record is specified for the slots showing each record for each slot in <CHANGECOMPONENT>.

6.12.2Part Change Notification reply (CHANGECOMP_ACK)

After Central Server Lite has transmitted the part change (CHANGECOMP) event to the host computer, it then waits for a reply message from the host computer.

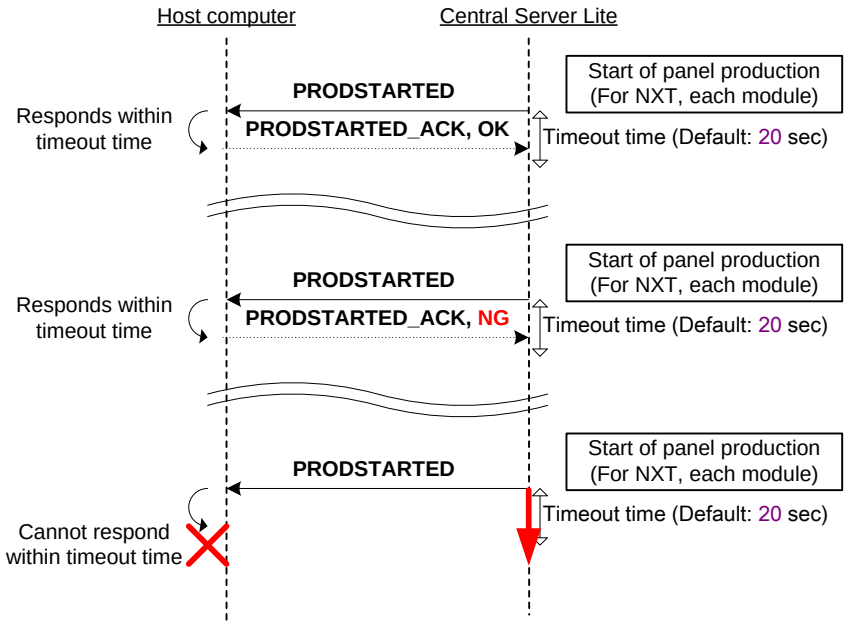
Trigger	Change to a new part during splicing	
Direction	Host computer -> Central Server Lite	
Event Message Format	STX**CHANGECOMP_ACK**TabSeqIDTabMachineNameTabModuleNoTab**<CHANGECOMPONENT_ACK>**	
<CHANGECOMPONENT_ACK> Format	NumListCR StageNoTabSlotNoTabResultTabPartNoTabFeederIDTabReelIDTabRemainingTimeCR : StageNoTabSlotNoTabResultTabPartNoTabFeederIDTabReelIDTabRemainingTimeCR ETX	
Data Item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	MachineName	Machine name Echoes back the value from the request side.
	ModuleNo	Module number (Refer to section 6.2) Echoes back the value from the request side.
	NumList	The data record quantity below
	StageNo	Stage number (Refer to section 6.2) Echoes back the value from the request side.
	SlotNo	Slot number (Refer to section 6.2) Echoes back the value from the request side.
	Result	Result 0: OK 1: NG
	PartNo	Part Barcode Label Echoes back the value from the request side.
	FeederID	Feeder ID (unique ID) Echoes back the value from the request side.
	ReelID	Reel ID (unique ID) Echoes back the value from the request side.
	RemainingTime	Floor life remaining time (0~999999) Units: minutes

When the trigger for the part change notification reply (CHANGECOMP_ACK) occurs at several slots on the same module at the same time, a record is specified for the slots showing each record for each slot.

6.13 Production Start

The sequence and message format at the start of production are described below.
In the case of the NXT, this notification is sent from each module upon the start of production.

Also, when the production start notification reply (PRODSTARTED_ACK) is NG or timeouts with this sequence, Central Server Lite subsequently processes the production start notification reply (PRODSTARTED_ACK) in the same manner as if it received an "OK" result.



6.13.1Production start notification (PRODSTARTED)

This event is reported at the start of production.

Trigger	When production starts at the machine (or each module in the case of the NXT)	
Direction	Central Server Lite -> Host computer	
Event message format	STX**PRODSTARTED**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabLaneNoTabProductModeTabProgramNameTabPanelNoETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	Time at which event occurred (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	LaneNo	Conveyor name 1: Front side 2: Rear side
	ProductMode	Production mode 0:Product 1:Pass (Unsupported)
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B"
	PanelNo	Running number for produced panels NXTR : 1000000~24299999 Other : 0~9999999 For the NXT or NXTR, the same running number is reported by each module for a panel in the machine. When to reset the serial number - NXTR：Not cleared in principle. It is cleared in special cases such as when upgrading. - NXT：When a job with a different name is transmitted.

6.13.2Production start notification reply(PRODSTARTED_ACK)

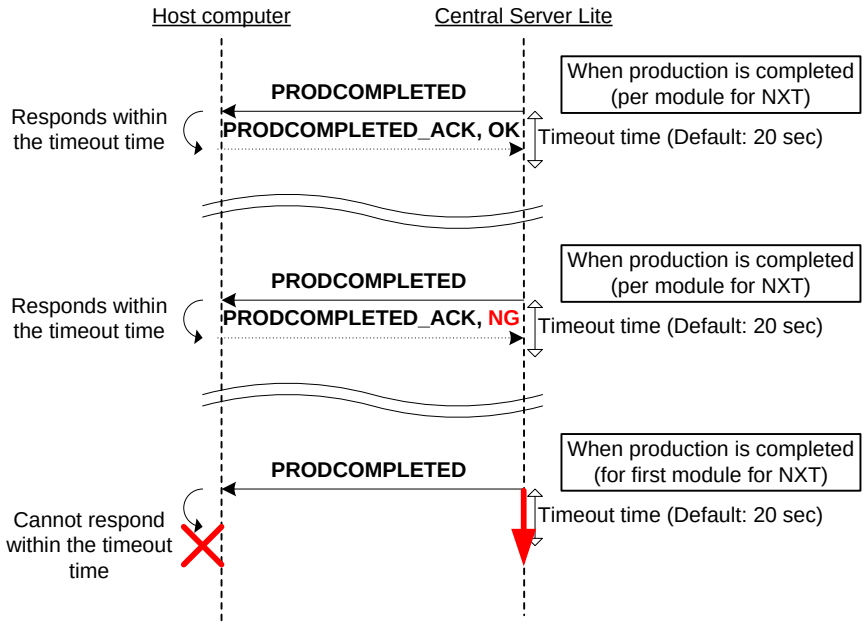
When Central Server Lite has sent a production start notification (PRODSTARTED) event to the host computer, it waits for the reply message from the host computer.

Trigger	When the host computer receives the production start notification (PRODSTARTED) (In the case of the NXT, from each module)	
Direction	Host computer -> Central Server Lite	
Event message format	STX**PRODSTARTED_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoTabLaneNoTabProductModeTabProgramNameTabPanelNoETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0: OK 1: NG
	MachineName	Machine name Echoes back the value for the requesting side.
	ModuleNo	Module number (Refer to section 6.2) Echoes back the value for the requesting side.
	LaneNo	Conveyor name 1: Front side 2: Rear side Echoes back the value for the requesting side.
	ProductMode	Production mode 0:Product 1:Pass (Unsupported) Echoes back the value for the requesting side.
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B" Echoes back the value for the requesting side.
	PanelNo	Running number for produced panels NXTR : 1000000~24299999 Other : 0~9999999 For the NXT or NXTR, the same running number is reported by each module for a panel in the machine. When to reset the serial number - NXTR：Not cleared in principle. It is cleared in special cases such as when upgrading. - NXT：When a job with a different name is transmitted.

6.14 Production completed

This section gives the format and sequence of messages when production is completed at a machine.
For the NXT, each module reports this information after it completes production.

Also, when the production completed reply (PRODCOMPLETED_ACK) is NG or timeouts for this sequence, Central Server Lite subsequently processes the production completed II reply (PRODCOMPLETED_ACK) in the same manner as if it received an "OK" result.



6.14.1 Production completed (PRODCOMPLETED)

This report is sent when the machine completes production.

Trigger	After the machine finishes production (modules for NXT)	
Direction	Central Server Lite -> Host computer	
Event message format	STX**PRODCOMPLETED**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabLaneNoTabProductModeTabProgramNameTabPanelNoTabBlockCountTabBlockSkipCountETX	
Data items	SeqID	Sequence ID (1 ~ 999999) The requesting side is assigned a unique integer, and the replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	This is the date and time the event occurred. (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number（Refer to section 6.2）
	LaneNo	Conveyor name 1: Front side 2: Rear side
	ProductMode	Production mode o: Product 1: Pass

	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B"
	PanelNo	Running number for produced panels NXTR : 1000000~24299999 Other : 0~9999999 For the NXT or NXTR, the same running number is reported by each module for a panel in the machine. When to reset the serial number - NXTR：Not cleared in principle. It is cleared in special cases such as when upgrading. - NXT：When a job with a different name is transmitted.
	BlockCount	Number of boards produced (0 to 9999)
	BlockSkipCount	Number of skipped boards (0 to 9999)

6.14.1Production completed reply (PRODCOMPLETED_ACK)

After Central Server Lite has sent the production completed report (PRODCOMPLETED) to the host computer, it waits for a reply message from the host computer.

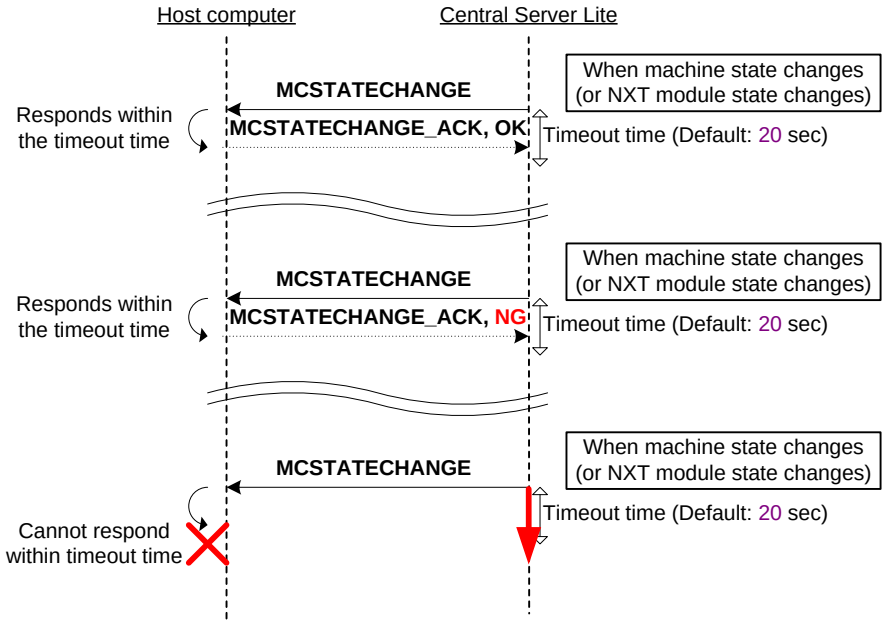
Trigger	When the host computer receives a production completed report (PRODCOMPLETED) (module in the case of the NXT)	
Direction	Host computer -> Central Server Lite	
Event message format	STX**PRODCOMPLETED_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoTab LaneNoTabProductModeTabProgramNameTabPanelNoETX	
Data items	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0: OK 1: NG
	MachineName	Machine name Echoes back the value for the requesting side.
	ModuleNo	Module number (Refer to Chapter 4.2.1) Echoes back the value for the requesting side.
	LaneNo	Conveyor name 1: Front side 2: Rear side Echoes back the value for the requesting side.
	ProductMode	Production mode 0:Product 1:Pass Echoes back the value for the requesting side.
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: “_T” Bottom: “_B” Echoes back the value for the requesting side.

	PanelNo	Running number for produced panels NXTR : 1000000~24299999 Other : 0~9999999 For the NXT or NXTR, the same running number is reported by each module for a panel in the machine. When to reset the serial number - NXTR : Not cleared in principle. It is cleared in special cases such as when upgrading. - NXT : When a job with a different name is transmitted.

6.15 Machine State Change

The sequence and message format when the machine state changes are described below.
In the case of the NXT, this message is sent from each module when the state changes.

Also, when machine status change notification reply (MCSTATECHANGE_ACK) is NG or timeouts on this sequence, Central Server Lite subsequently processes the machine status change notification reply (MCSTATECHANGE_ACK) in the same manner as if it received an OK result.



6.15.1Machine state change notification (MCSTATECHANGE)

This notification is sent when the machine state changes.

Trigger	When the machine state changes (or module in the case of the NXT)	
Direction	Central Server Lite -> Host computer	
Event message format	STX**MCSTATECHANGE**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabPreviousStatusTabCurrectStatusETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	Time at which event occurred (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	PreviousStatus	Machine's (module's) previous status 2:Change Over (changeover status) 3:Idle (waiting for command other than START) 4:Loading (panel conveyance status) 5:Run (part mounting status) 6:Stop (error stop status) 7:Wait Next (waiting for next process) 8:Wait Parts (waiting due to parts out) 9:Wait Previous (waiting for previous process) 10:Wait Switch (START switch enabled) 11:Maintenance (maintenance status)
	CurrentStatus	Machine's (module's) current status 2:Change Over (changeover status) 3:Idle (waiting for command other than START) 4:Loading (panel conveyance status) 5:Run (part mounting status) 6:Stop (error stop status) 7:Wait Next (waiting for next process) 8:Wait Parts (waiting due to parts out) 9:Wait Previous (waiting for previous process) 10:Wait Switch (START switch enabled) 11:Maintenance (maintenance status)

6.15.2Machine state change notification reply (MCSTATECHANGE_ACK)

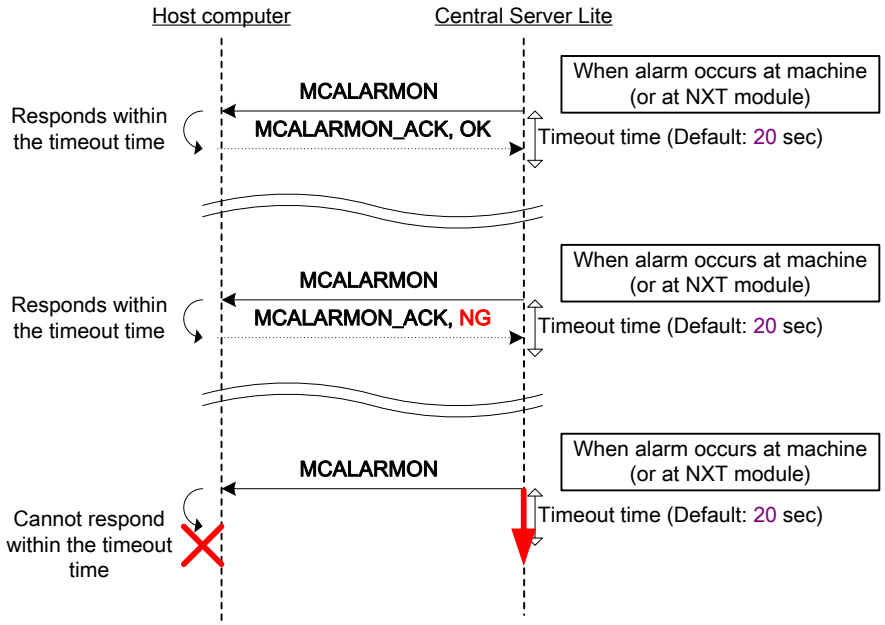
When Central Server Lite has sent a machine state change notification (MCSTATECHANGE) event to the host computer, it waits for the reply message from the host computer.

Trigger	When the host computer receives the machine state change notification (MCSTATECHANGE) (In the case of the NXT, from each module)	
Direction	Host computer -> Central Server Lite	
Event message format	STX **MCSTATECHANGE_ACK** Tab SeqID Tab Result Tab MachineName Tab ModuleNo ETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0: OK 1: NG
	MachineName	Machine name Echoes back the value for the requesting side.
	ModuleNo	Module number (Refer to section 6.2) Echoes back the value for the requesting side.

6.16 Machine Alarm ON

The sequence and message format when an alarm occurs at the machine are described below.
In the case of the NXT, this message is sent from each module upon occurrence of an alarm.

Also, even if the machine alarm ON notification reply (MCALARMON_ACK) is NG or timeouts for this sequence, Central Server Lite subsequently processes the Machine alarm ON notification reply (MCALARMON_ACK) in the same manner as if it received an "OK" result.



6.16.1 Machine alarm ON notification (MCALARMON)

This notification is sent when an alarm occurs at the machine.

Trigger	When an alarm occurs at the machine (or module in the case of the NXT)	
Direction	Central Server Lite -> Host computer	
Event message format	STX**MCALARMON**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabErrorCodeTabSubErrorCodeETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	Time at which event occurred (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	ErrorCode	Error code (8 digit hexadecimal: 00000000~FFFFFFFF)
	SubErrorCode	Sub-error code (8 digit hexadecimal: 00000000~FFFFFFFF)

6.16.2Machine alarm ON notification reply (MCALARMON_ACK)

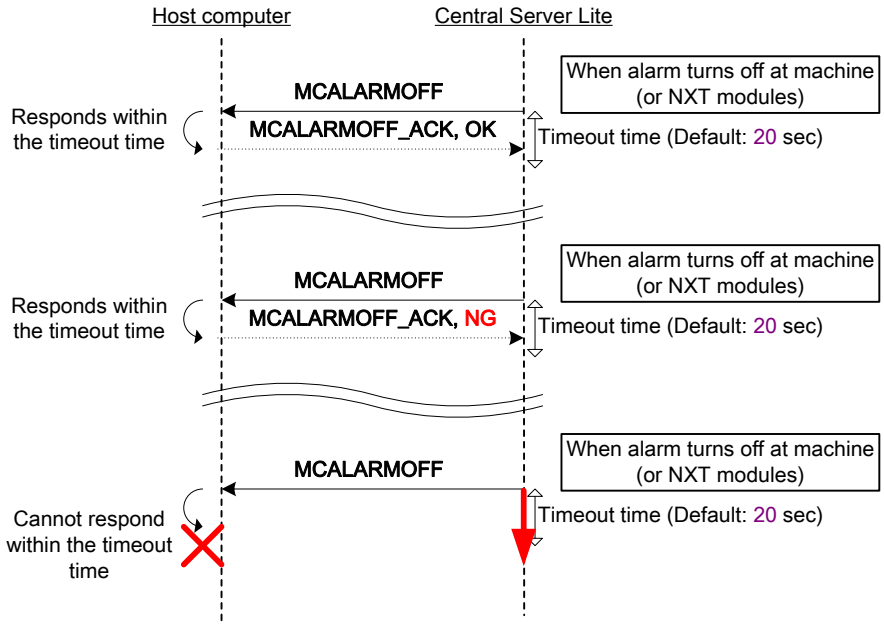
When Central Server Lite has sent a Machine alarm ON notification (MCALARMON) event to the host computer, it waits for the reply message from the host computer.

Trigger	When the host computer receives the Machine alarm ON notification (MCALARMON) (or module in the case of the NXT)	
Direction	Host computer -> Central Server Lite	
Event message format	STX **MCALARMON_ACK** Tab SeqID Tab Result Tab MachineName Tab ModuleNo ETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0: OK 1: NG
	MachineName	Machine name Echoes back the value for the requesting side.
	ModuleNo	Module number (Refer to section 6.2) Echoes back the value for the requesting side.

6.17 Machine Alarm OFF

The sequence and message format when an alarm is cleared at the machine are described below.
In the case of the NXT, this message is sent from each module when an alarm is cleared.

Also, even if the machine alarm OFF notification reply (MCALARMOFF_ACK) is NG or timeouts for this sequence, Central Server Lite subsequently processes the Machine alarm OFF notification reply (MCALARMOFF_ACK) in the same manner as if it received an "OK" result.



6.17.1Machine alarm OFF notification (MCALARMOFF)

This notification is sent when an alarm is cleared at the machine.

Trigger	When an alarm is cleared at the machine (or module in the case of the NXT)	
Direction	Central Server Lite -> Host computer	
Event message format	STX**MCALARMOFF**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTab ErrorCodeTabSubErrorCodeETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	Time at which event occurred (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	ErrorCode	Error code (8 digit hexadecimal: 00000000~FFFFFFFF)
	SubErrorCode	Sub-error code (8 digit hexadecimal: 00000000~FFFFFFFF)

6.17.2Machine alarm OFF notification reply (MCALARMOFF_ACK)

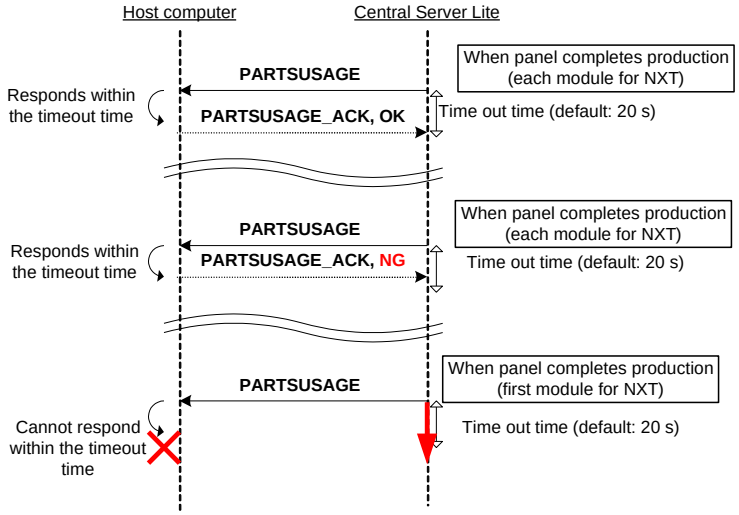
When Central Server Lite has sent a Machine alarm OFF notification (MCALARMOFF) event to the host computer, it waits for the reply message from the host computer.

Trigger	When the host computer receives the Machine alarm OFF notification (MCALARMOFF) (or module in the case of the NXT)	
Direction	Host computer -> Central Server Lite	
Event message format	STX**MCALARMOFF_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0: OK 1: NG
	MachineName	Machine name Echoes back the value for the requesting side.
	ModuleNo	Module number (Refer to section 6.2) Echoes back the value for the requesting side.

6.18 Parts Use Count Report

The machine states the data sequence and message format for the parts use count reported when production completes. For the NXT, this message is reported to each module when they complete production.

This sequence continues normal processing just the same as when Central Server Lite receives an OK for the parts use count report reply (PARTSUSAGE_ACK) even after a parts use count report reply (PARTSUSAGE_ACK) is NG or times out.



6.18.1Parts use count report (PARTSUSAGE)

The machine reports the part count used when production completes.

Trigger	When the machine completes production (each module for NXT)	
Direction	Central Server Lite -> Host computer	
Event message format	STX**PARTSUSAGE**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabLaneNoTabProgramNameTabPanelNoTab**<PartsUsageInfo>**ETX	
<PartsUsage Info> format	NumListCR StageNoTabSlotNoTabPartNameTabAVLNameTabPartsUsageTabPickupCountTabErrorPartsTabErrorRejectTabRejectPartsTabDislodgedPartsTabRescancountTabNoPickup CR : StageNoTabSlotNoTabPartNameTabAVLNameTabPartsUsageTabPickupCountTabErrorPartsTabErrorRejectTabRejectPartsTabDislodgedPartsTabRescancountTabNoPickup CR	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echo-backs this value. When the maximum value is reached, the count returns to 1.
	Time	Time at which event occurred (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2) 1 fixed if machine is not modular.
	LaneNo	Conveyor name 1: Front side 2: Rear side
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B"
	PanelNo	Running number for produced panels NXTR : 1000000~24299999 Other : 0~9999999 For the NXT or NXTR, the same running number is reported by each module for a panel in the machine. When to reset the serial number - NXTR : Not cleared in principle. It is cleared in special cases such as when upgrading. - NXT : When a job with a different name is transmitted.
	NumList	The data record quantity below.
	StageNo	Stage number (Refer to section 6.2)
	SlotNo	Slot number (Refer to section 6.2)
	PartName	Part Barcode Label
	AVLName	AVL name
	PartsUsage	Parts used count (1 to 7 values below)
	PickupCount	1. Pickup count
	ErrorParts	2. Error part count (3, 4, 5 and 6 values below)
	ErrorReject	3. Error reject count
	RejectParts	4. Machine conditions reject count

	DislodgedParts	5. Pickup miss count
	Rescancount	6. Rescan count
	NoPickup	7. No pickup count

6.18.2 Parts use count report reply (PARTSUSAGE_ACK)

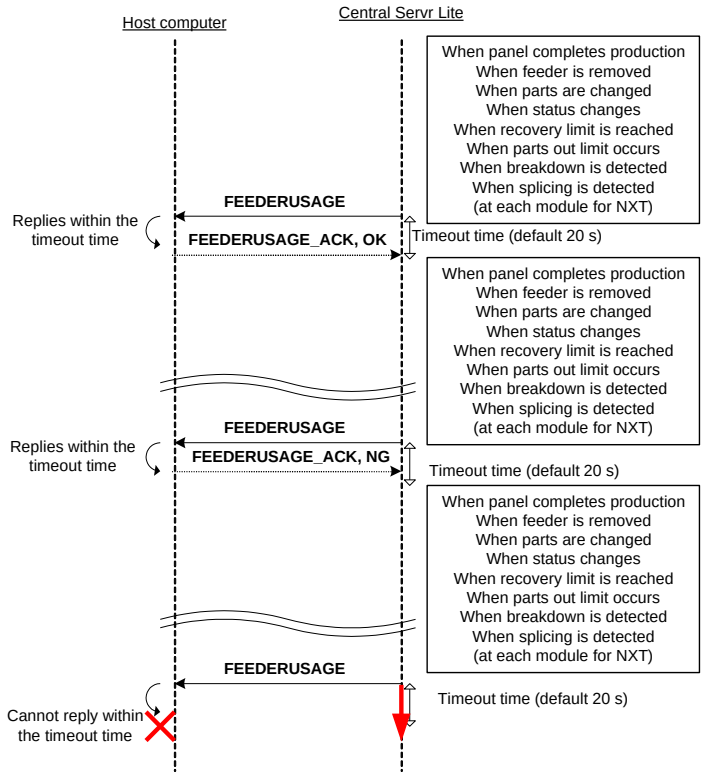
After Central Server Lite sends the parts use count report (PARTUSAGE) event to the host computer, it waits for a reply message from the host computer.

Trigger	When the host computer receives a parts use count report (PARTSUSAGE) (Each module for the NXT)	
Direction	Host computer -> Central Server Lite	
Event message format	STX**PARTSUSAGE_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoTabLaneNoTabProgramNameTabPanelNoETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echo-backs this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0:OK 1:NG
	MachineName	Machine name Echoes back the value for the requesting side.
	ModuleNo	Module number (Refer to section 6.2) Echoes back the value for the requesting side.
	LaneNo	Conveyor name 1: Front side 2: Rear side Echoes back the value for the requesting side.
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B" Echoes back the value for the requesting side.
	PanelNo	Running number for produced panels NXTR : 1000000~24299999 Other : 0~9999999 For the NXT or NXTR, the same running number is reported by each module for a panel in the machine. When to reset the serial number - NXTR : Not cleared in principle. It is cleared in special cases such as when upgrading. - NXT : When a job with a different name is transmitted.

6.19 Feeder Pickup Count Report (Unsupported)

When the machine completes production, feeders are removed, or parts on a feeder are changed, the pickup count data sequence and message format are listed for the reported feeder. For the NXT, this message is reported for each module when production is complete at each module.

This sequence continues normal processing just the same as when Central Server Lite receives an OK value for feeder pickup count report reply (FEEDERUSAGE_ACK) even if the feeder pickup count report reply (FEEDERUSAGE_ACK) is no good or times out.



6.19.1Feeder pickup count report (FEEDERUSAGE) (Unsupported)

The pickup count is reported when the machine completes production, a feeder is removed, or parts on a feeder are changed.

Trigger	When the machine completes production (each module for the NXT), a feeder is removed, or parts on a feeder are changed	
Direction	Central Server Lite -> Host computer	
Event message format	STX**FEEDERUSAGE**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTab**<FeederUsageInfo>**ETX	
<FeederUsageInfo> format	NumListCR StageNoTabSlotNoTabFeederIDTabFeederNameTabPickupCountTabErrorFeederTabErrorRejectTabRejectFeederTabDislodgedFeederTabRescancountTabNoPickupCR : StageNoTabSlotNoTabFeederIDTabFeederNameTabPickupCountTabErrorFeederTabErrorRejectTabRejectFeederTabDislodgedFeederTabRescancountTabNoPickupCR	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echo-backs this value. When the maximum value is reached, the count returns to 1.
	Time	Time at which event occurred (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	NumList	The number of data records below.
	StageNo	Stage number (Refer to section 6.2)
	SlotNo	Slot number (Refer to section 6.2)
	FeederID	Feeder ID (unique ID)
	FeederName	Feeder name
	PickupCount	1. Pickup count
	ErrorFeeder	2. Error pickup count (3, 4,5,6, and 7 values below)
	ErrorReject	3. Error reject count
	RejectFeeder	4. Machine conditions reject count
	DislodgedFeeder	5. Pickup miss count
	Rescancount	6, Rescan count
	NoPickup	7. No pickup count

6.19.2 Feeder pickup count report reply (FEEDERUSAGE_ACK) (Unsupported)

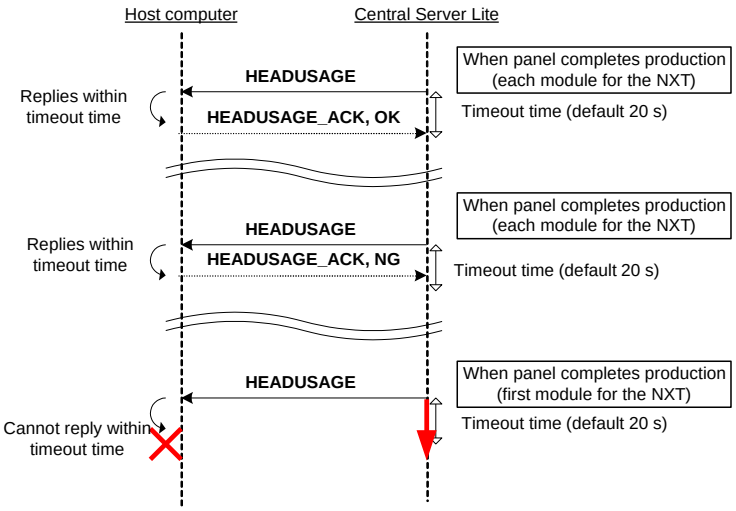
After Central Server Lite sends a feeder pickup count report (FEEDERUSAGE) event to the host computer, it waits for a reply message from the host computer.

Trigger	When the host computer receives a feeder pickup count report (FEEDERUSAGE) (each module for the NXT)	
Direction	Host computer -> Central Server Lite	
Event Message Format	STX **FEEDERUSAGE_ACK** Tab SeqID Tab Result Tab MachineName Tab ModuleNo ETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echo-backs this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0:OK 1:NG
	MachineName	Machine name Echoes back the value from the request side.
	ModuleNo	Module number (Refer to section 6.2) Echoes back the value from the request side.

6.20 Head Pickup Count Report

When the machine completes production, the pickup count data sequence for the reported head and the message format are listed.
This report only supports the NXT and AIM.
This message is reported for each module when each module completes production.

This sequence continues normal processing just the same as when Central Server Lite receives an OK value for head pickup count report reply (HEADUSAGE_ACK) even if the head pickup count report reply (HEADUSAGE_ACK) is no good or times out.



6.20.1Head pickup count report (HEADUSAGE)

The pickup count is reported when the machine completes production.

Trigger	When the machine completes production (each module for the NXT)	
Direction	Central Server Lite -> Host computer	
Event message format	STX**HEADUSAGE**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTab**<HeadUsageInfo>**ETX	
<HeadUsage Info> format	NumListCR HeadNoTabHeadIDTabHeadNameTabPickupCountTabErrorHeadTabErrorRejectTabRejectHeadTabDislodgedHeadTabRescancountTabNoPickupCR : HeadNoTabHeadIDTabHeadNameTabPickupCountTabErrorHeadTabErrorRejectTabRejectHeadTabDislodgedHeadTabRescancountTabNoPickupCR	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echo-backs this value. When the maximum value is reached, the count returns to 1.
	Time	Time at which event occurred (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	NumList	The number of data records below.
	HeadNo	Head number (1~2)
	HeadID	Head ID (unique ID)
	HeadName	Head name
	PickupCount	1. Pickup count
	ErrorHead	2. Error pickup count (3, 4,5,6, and 7 values below)
	ErrorReject	3. Error reject count
	RejectHead	4. Machine conditions reject count
	DislodgedHead	5. Pickup miss count
	Rescancount	6, Rescan count
	NoPickup	7. No pickup count

6.20.2Head pickup count report reply (HEADUSAGE_ACK)

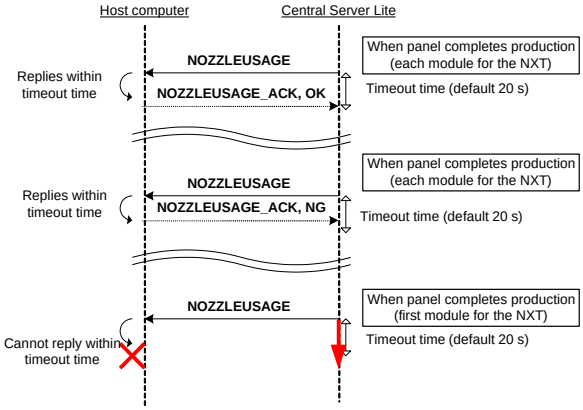
After Central Server Lite sends a head pickup count report (HEADUSAGE) event to the host computer, it waits for a reply message from the host computer.

Trigger	When the host computer receives a head pickup count report (HEADUSAGE) (each module for the NXT)	
Direction	Host computer -> Central Server Lite	
Event message format	STX**HEADUSAGE_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echo-backs this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0:OK 1:NG
	MachineName	Machine name Echoes back the value from the request side.
	ModuleNo	Module number (Refer to section 6.2) Echoes back the value from the request side.

6.21 Nozzle Pickup Count Report

When the machine completes production, the pickup count data sequence for the reported nozzle and the message format are listed.
This report only supports the NXT and AIM.
This message is reported for each module when each module completes production.

This sequence continues normal processing just the same as when Central Server Lite receives an OK value for nozzle pickup count report reply (NOZZLEUSAGE_ACK) even if the nozzle pickup count report reply (NOZZLEUSAGE_ACK) is no good or times out.



6.21.1Nozzle pickup count report (NOZZLEUSAGE)

The number of parts used is reported when the machine completes production.

Trigger	When the machine completes production (each module for the NXT)	
Direction	Central Server Lite -> Host computer	
Event message format	STX**NOZZLEUSAGE**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTab**<NozzleUsageInfo>**ETX	
<NozzleUsageInfo> format	NumListCR NozzleNoTabNozzlePitNoTabNozzleIDTabNozzleNameTabNozzleSTIDTabNozzleSTNameTabPickupCountTabErrorNozzleTabErrorRejectTabRejectNozzleTabDislodgedNozzleTabRescancountTabNoPickupCR : NozzleNoTabNozzlePitNoTabNozzleIDTabNozzleNameTabNozzleSTIDTabNozzleSTNameTabPickupCountTabErrorNozzleTabErrorRejectTabRejectNozzleTabDislodgedNozzleTabRescancountTabNoPickupCR	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echo-backs this value. When the maximum value is reached, the count returns to 1.
	Time	Time at which event occurred (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	NumList	The number of data records below.
	NozzleNo	Nozzle station number (1~4)
	NozzlePitNo	Nozzle pit number (1~32)
	NozzleID	Nozzle ID
	NozzleName	Nozzle name
	NozzleSTID	Nozzle station ID
	NozzleSTName	Nozzle station name
	PickupCount	1. Pickup count
	ErrorNozzle	2. Error pickup count (3, 4,5,6, and 7 values below)
	ErrorReject	3. Error reject count
	RejectNozzle	4. Machine conditions reject count
	DislodgedNozzle	5. Pickup miss count
	Rescancount	6, Rescan count
	NoPickup	7. No pickup count

6.21.2Nozzle pickup count report reply (NOZZLEUSAGE_ACK)

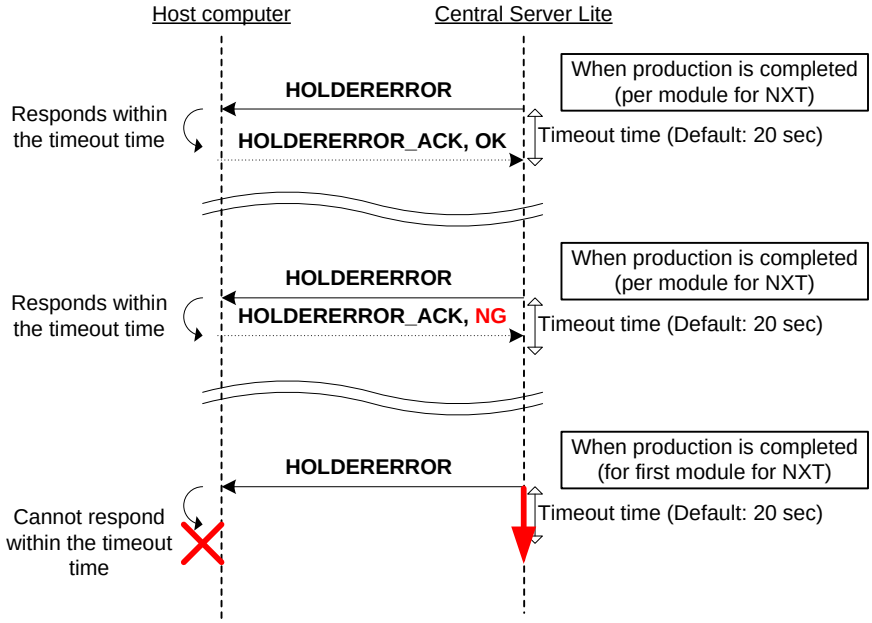
After Central Server Lite sends a nozzle pickup count report (NOZZLEUSAGE) event to the host computer, it waits for a reply message from the host computer.

Trigger	When the host computer receives a nozzle pickup count report (NOZZLEUSAGE) (each module for the NXT)	
Direction	Host computer -> Central Server Lite	
Event message format	STX**NOZZLEUSAGE_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echo-backs this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0:OK 1:No good
	MachineName	Machine name Echoes back the value from the request side.
	ModuleNo	Module number (Refer to section 6.2) Echoes back the value from the request side.

6.22 Holder Error Information Report

This section gives the format and sequence of messages for reporting holder errors after completing production in the machine.
For the NXT, each module reports this information after it completes production.

Even if NG is reported in the holder error information report reply (HOLDERERROR_ACK) or a time out error occurs, Central Server Lite subsequently processes the holder error information report reply (HOLDERERROR_ACK) in the same manner as if it received an "OK" result.



6.22.1Holder error information report (HOLDERERROR)

When the machine has finished production, the holder error information is reported.

Trigger	After the machine finishes production (modules for NXT)	
Direction	Central Server Lite -> Host computer	
Event message format	STX**HOLDERERROR**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabLaneNoTabProgramNameTabPanelNoTab**<HolderInfo>**ETX	
<HolderInfo> format	NumListCR StageNoTabSlotNoTabHeadNoTabHolderNoTabReferenceTabErrorCodeTabSubErrorCodeCR : StageNoTabSlotNoTabHeadNoTabHolderNoTabReferenceTabErrorCodeTabSubErrorCodeCR	
Data items	SeqID	Sequence ID (1 ~ 999999) The requesting side is assigned a unique integer, and the replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	This is the date and time the event occurred. (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	LaneNo	Conveyor name 1: Front side 2: Rear side
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B"
	PanelNo	Running number for produced panels NXTR : 1000000~24299999 Other : 0~9999999 For the NXT or NXTR, the same running number is reported by each module for a panel in the machine. When to reset the serial number - NXTR : Not cleared in principle. It is cleared in special cases such as when upgrading. - NXT : When a job with a different name is transmitted.
	NumList	Number of data records
	StageNo	Stage number (Refer to section 6.2)
	SlotNo	Slot number (Refer to section 6.2)
	HeadNo	Head number
	HolderNo	Holder number
	Reference	Reference designator
	ErrorCode	Error code (8 digits in hexadecimal from 00000000 to FFFFFFFF)
	SubErrorCode	Suberror code (8 digits in hexadecimal from 00000000 to FFFFFFFF)

*When production completes without errors, data for NumList:1 reports with "0" or remains blank.

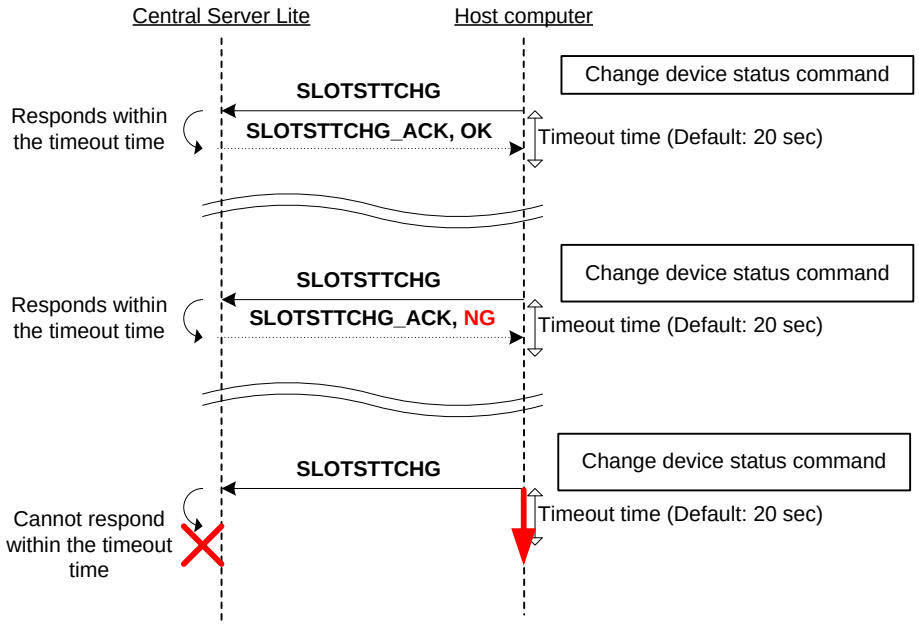
6.22.2Holder error information report reply (HOLDERERROR_ACK)

After Central Server Lite has sent the holder error information report (HOLDERERROR) to the host computer, it waits for a reply message from the host computer.

Trigger	When the host computer receives a holder error information report (HOLDERERROR) (module in the case of the NXT)	
Direction	Host computer -> Central Server Lite	
Event message format	STX**HOLDERERROR_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoTab LaneNoTabProgramNameTabPanelNoETX	
Data items	SeqID	Sequence ID (1 ~ 999999) The requesting side is assigned a unique integer, and the replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0: OK 1: Not OK
	MachineName	Machine name Echoes back the value from the requesting side.
	ModuleNo	Module number (Refer to section 6.2) Echoes back the value from the requesting side.
	LaneNo	Conveyor name 1: Front side 2: Rear side Echoes back the value from the requesting side.
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B" Echoes back the value from the requesting side.
	PanelNo	Running number for produced panels NXTR : 1000000~24299999 Other : 0~9999999 For the NXT or NXTR, the same running number is reported by each module for a panel in the machine. When to reset the serial number - NXTR：Not cleared in principle. It is cleared in special cases such as when upgrading. - NXT：When a job with a different name is transmitted.

6.23 Change device status command

This section gives the format and sequence of messages when the user host wants to warn of a parts out at the machine and command that the status of a part is that usage is prohibited.



6.23.1Change device status command (SLOTSTTCHG)

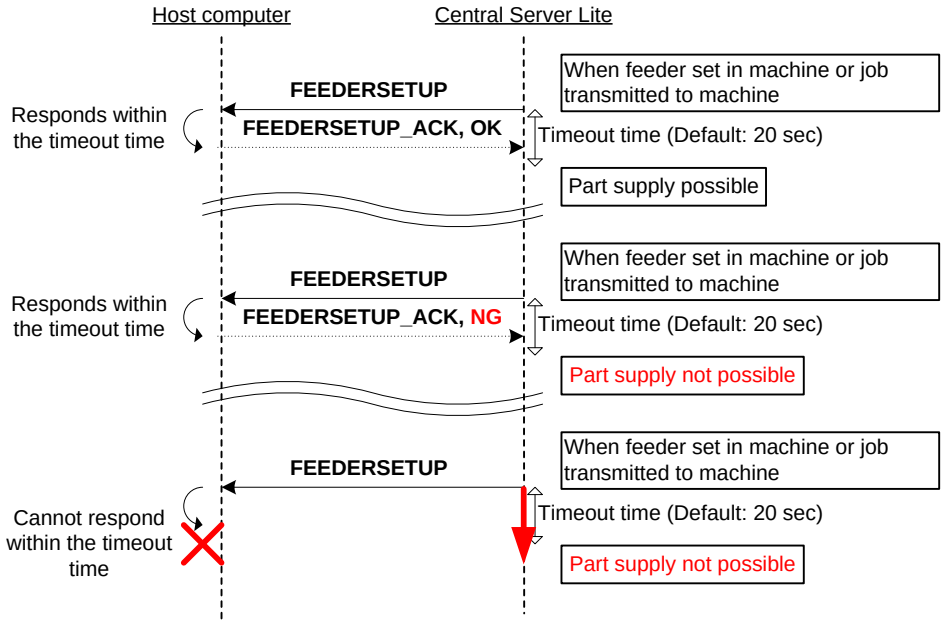
Trigger	When the user host wants to warn of parts out to the machine and command that a status of a part is that usage is prohibited.	
Direction	Host computer <-> Central Server Lite	
Event message format	STX**SLOTSTTCHG**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTab**<SlotInfo>**ETX	
<SlotInfo>format	NumListCR StageNoTabSlotNoTabStatusTabSubStatusCR : StageNoTabSlotNoTabStatusTabSubStatusCR	
Data items	SeqID	Sequence ID (1 ~ 999999) The requesting side is assigned a unique integer, and the replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	This is the date and time the event occurred. (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	NumList	Number of data records
	StageNo	Applicable stage number (Refer to section 6.2)
	SlotNo	Applicable slot number (Refer to section 6.2)
	Status	Device status 1: Verification bad (Cannot be used) 2: No data (Cannot be used: No data is registered at the host computer, etc.) 3: Parts out warning
	SubStatus	When Status=1: 0 (fixed) When Status=2: 0 (fixed) When Status=3: The time for parts out (0 to 99999999 seconds)

6.23.2Change device status command reply (SLOTSTTCHG_ACK)

Trigger	When Central Server Lite receives a change device status command.	
Direction	Central Server Lite -> Host computer	
Event message format	STX**SLOTSTTCHG_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoETX	
Data items	SeqID	Sequence ID (1 ~ 999999) The requesting side is assigned a unique integer, and the replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0: OK 1: Not OK
	MachineName	Machine name Echoes back the value from the requesting side.
	ModuleNo	Module number (Refer to section 6.2) Echoes back the value from the requesting side.

6.24 Feeder Setup (FEEDERSETUP)

This section gives the format and sequence of messages for reporting feeder setup when feeders are set at the machine and when jobs are transmitted to machines.



6.24.1 Feeder setup report (FEEDERSETUP)

This event occurs when feeders are set at the machine and when jobs are transmitted to machines.

Trigger	A feeder is set on a machine A job is transmitted to a machine	
Direction	Central Server Lite -> Host computer	
Event message format	STX**FEEDERSETUP**TabSeqIDTabTimeTabLineNameTabMachineNameTabModule NoTabProgramNameTab**<FEEDERSETUPCOMPONENT>**	
<FEEDERSETUPCOMPONENT>format	NumListCR StageNoTabSlotNoTabFeederIDCR : StageNoTabSlotNoTabFeederIDCR ETX	
Data items	SeqID	Sequence ID (1 ~ 999999) The requesting side is assigned a unique integer, and the replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	This is the date and time the event occurred. (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier: Top: "_T" Bottom: "_B"
	NumList	Number of data records
	StageNo	Displays the stage number (Refer to section 6.2)
	SlotNo	Slot number (Refer to section 6.2)
	FeederID	Feeder ID (Unique ID)

For the feeder setup report (FEEDERSETUP), if multiple slots are set at the same time in the same module, there is 1 record per slot in the <FEEDERSETUPCOMPONENT> and there will be records for multiple slots.

6.24.2Feeder setup report check reply (FEEDERSETUP_ACK)

After Central Server Lite has sent the feeder setup report (FEEDERSETUP) to the host computer, it waits for a reply message from the host computer.
When the host computer replies to Central Server Lite with a 1 or 2 (NG) in the feeder setup report check reply (FEEDERSETUP_ACK), it is recognized that the part cannot be used.
When the host computer replies to Central Server Lite with a 0 (OK) in the feeder setup report check reply report reply (FEEDERSETUP_ACK), it is recognized that the part can be used.

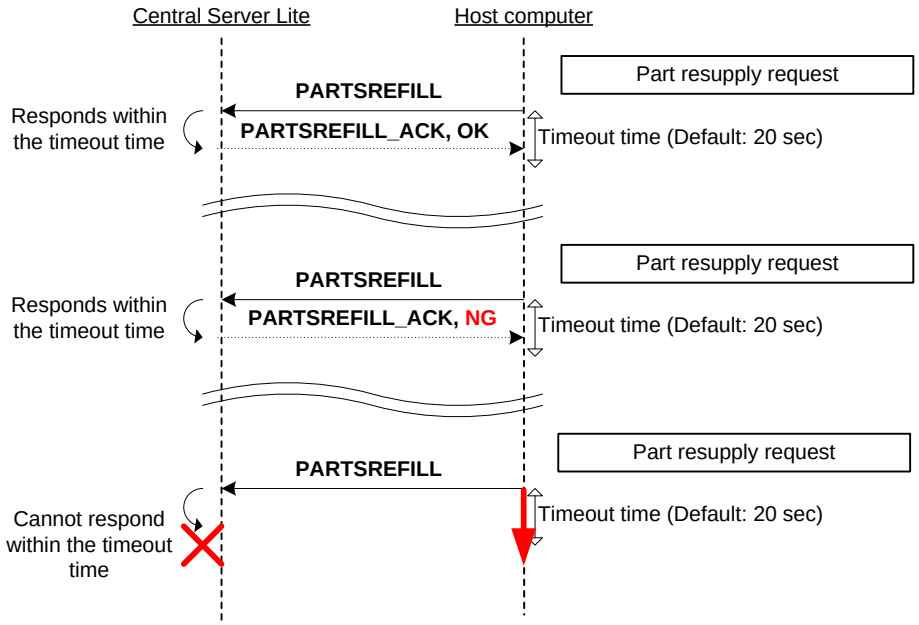
Trigger	A feeder is set on a machine Barcode check is performed from splicing	
Direction	Host computer -> Central Server Lite	
Event message format	STX**FEEDERSETUP_ACK**TabSeqIDTabMachineNameTabModuleNoTab**<FEEDERSETUPCOMPONENT_ACK>** ETX	
<FEEDERSETUPCOMPONENT_ACKformat	NumListCR StageNoTabSlotNoTabResultTabFeederIDTabSupplyTabCompChgFunctionTab**<PARTSCOMPONENT>**Tab**<ALTERNATECOMPONENT>**Tab**<ORGPOSCOMPONENT>**CR : StageNoTabSlotNoTabResultTabFeederIDTabSupplyTabCompChgFunctionTab**<PARTSCOMPONENT>**Tab**<ALTERNATECOMPONENT>**Tab**<ORGPOSCOMPONENT>**CR	
<PARTSCOMPONENT>format	NumList2CR ReelIDTabPartNoTabVendorTabLotNoTabDateCodeTabLightingclassTabQuantityTab TrayCountTabTrayXTabTrayYTabCompChgStatusCR : ReelIDTabPartNoTabVendorTabLotNoTabDateCodeTabLightingclassTabQuantityTab TrayCountTabTrayXTabTrayYTabCompChgStatusCR	
<ALTERNATECOMPONENT>format	NextPosNumListCR StageNoTabSlotNoCR : StageNoTabSlotNoCR	
<ORGPOSCOMPONENT>format	OrignalPosNumListCR StageNoTabSlotNoCR : StageNoTabSlotNoCR	
Data items	SeqID	Sequence ID (1 ~ 999999) The requesting side is assigned a unique integer, and the replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	MachineName	Machine name Echoes back the value from the requesting side.
	ModuleNo	Module number (Refer to section 6.2) Echoes back the value from the requesting side.
	NumList	Number of data records
	StageNo	Displays the stage number (Refer to section 6.2) Echoes back the value from the requesting side.
	SlotNo	Slot number (Refer to section 6.2) Echoes back the value from the requesting side.

	Result	Verification result 0: Verification OK (Can be used) 1: Verification bad (Cannot be used) Note: For dynamic alternate parts, do not report "1" for the original slot. 2: No data (Cannot be used: No data is registered at the host computer, etc.)
	FeederID	Feeder ID (Unique ID) Echoes back the value from the requesting side.
	Supply	Replenishment method for each feeder 0: Dynamic alternate feeders 1: Splicing (DynamicAlternate OFF ：fixed at "1")
	CompChgFunction	Replenished part change detection function present or not 0 (Fixed value)
	NumList2	Number of data records
	ReelID	Reel ID (unique ID) Note: This is the newly added reel ID for splicing.
	PartNo	Part Barcode Label Echoes back the value from the requesting side.
	Vendor	Part vendor name
	LotNo	Part lot number
	DateCode	Date code for the part
	LIghtingclass	Lighting class
	Quantity	Current remaining parts
	TrayCount	Quantity of trays (only for stacked tray parts)
	TrayX	Pickup position X coordinate (only for tray parts)
	TrayY	Pickup position Y coordinate (only for tray parts)
	CompChgStatus	Detection status for changeover of resupplied parts (by splicing, etc). -1 (Fixed value)
	NextPosNumList	Alternate feeder quantity (quantity of feeders including this feeder and alternate feeders) Note: If "0" is set for this value, do not put anything for StageNo and SlotNo.
	StageNo	Alternate feeder stage number
	SlotNo	Alternate feeder slot number
	OrignalPosNumList	Used when using the free allocation function. Original list number When not using the free allocation function, specify "0" for this function. Note: If "0" is set for this value, do not put anything for StageNo and SlotNo.
	StageNo	Used when using the free allocation function. Original stage number (Refer to section 6.2)
	SlotNo	Used when using the free allocation function. Original slot number (Refer to section 6.2)

For the feeder setup report check reply (FEEDERSETUP_ACK), if multiple slots are set at the same time in the same module, there is 1 record per slot in the <FEEDERSETUPCOMPONENT_ACK> and there will be records for multiple slots.

6.25 Part Resupply Request (PARTSREFILL)

After splicing or tray verification has been performed in the user host computer, the PARTSREFILL event is sent from the user host to Central Server Lite in order to reflect the condition in Nexim.



6.25.1 Part resupply request (PARTSREFILL)

Trigger	When the user host is notified of a parts resupply event such as splicing or tray verification.	
Direction	Host computer -> Central Server Lite	
Event message format	STX PARTSREFILL Tab SeqID Tab Time Tab MachineName Tab ModuleNo Tab StageNo Tab SlotNo Tab DeviceStatus Tab CompChgFunction Tab VerifyType Tab <PARTSCOMPONENT>	
<PARTSCOMPONENT>format	NumList CR ReelID Tab PartNo Tab Vendor Tab LotNo Tab DateCode Tab Lightingclass Tab Quantity Tab TrayCount Tab TrayX Tab TrayY Tab CompChgStatus CR : ReelID Tab PartNo Tab Vendor Tab LotNo Tab DateCode Tab Lightingclass Tab Quantity Tab TrayCount Tab TrayX Tab TrayY Tab CompChgStatus CR ETX	
Data items	SeqID	Sequence ID (1 ~ 999999) The requesting side is assigned a unique integer, and the replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	This is the date and time the event occurred. (YYYYMMDDhhmmss)
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	StageNo	Displays the stage number (Refer to section 6.2) Request side value
	SlotNo	Slot number (Refer to section 6.2)
	DeviceStatus	Verification result 0 (Fixed value)
	CompChgFunction	Replenished part change detection function present or not 0 (Fixed value)
	VerifyType	0: Splicing, 1: Tray verification
	NumList	Number of data records
	ReelID	Reel ID (unique ID) Note: This is the newly added reel ID for splicing.
	PartNo	Part Barcode Label
	Vendor	Part vendor name
	LotNo	Part lot number
	DateCode	Date code for the part
	LIghtingclass	Lighting class
	Quantity	Current remaining parts
	TrayCount	Quantity of trays (only for tray parts.stacked)
	TrayX	Pickup position X coordinate (only for tray parts)
	TrayY	Pickup position Y coordinate (only for tray parts)
	CompChgStatus	Detection status for changeover of resupplied parts (by splicing, etc). -1 (Fixed value)

A fixed value of "0" for TrayCount, TrayX, and TrayY for tape parts is reported.

6.25.2Part resupply request reply (PARTSREFILL_ACK)

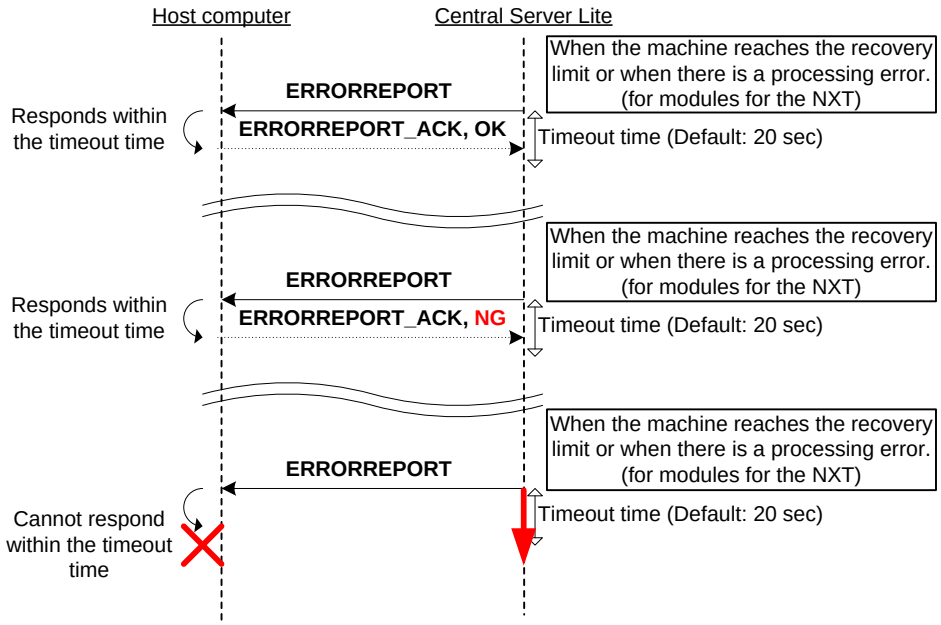
Trigger	When Central Server Lite has completed part resupply processing	
Direction	Central Server Lite -> Host computer	
Event message format	STX **PARTSREFILL_ACK**Tab SeqID Tab Result ETX	
Data items	SeqID	Sequence ID (1 ~ 999999) The requesting side is assigned a unique integer, and the replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Part resupply processing result 0: Normal 1: Error 998: Processing error Note

Note: Dynamic alternate feeders and splicing cannot be performed for the same part in the same module at the same time. Be sure to set the resupply method in the "Supply" parameter in the FEEDERSETUP event. If both resupply methods are used at the same time, Nexim Host Interface will report to the machine that those slots cannot be used.

6.26 Error Report (ERRORREPORT)

This event occurs when parts run out and processing errors are reported. In addition, this reports the tray pickup position and number of stacked trays.

Even if NG is reported in the error report reply (ERRORREPORT_ACK) or a time out error occurs, Central Server Lite subsequently processes the error report reply (ERRORREPORT_ACK) in the same manner as if it received an "OK" result.



6.26.1Error report (ERRORREPORT)

Trigger	When a machine reaches the recovery limit. When there is a processing error.	
Direction	Central Server Lite -> Host computer	
Event message format	STXERRORREPORTTabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabStageNoTabSlotNoTabStatusTabQuantityTabTrayCountTabTrayXTabTrayYETX	
Data items	SeqID	Sequence ID (1 ~ 999999) The requesting side is assigned a unique integer, and the replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	This is the date and time the event occurred. (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	StageNo	Displays the stage number (Refer to section 6.2)
	SlotNo	Slot number (Refer to section 6.2)
	Status	Status 1: Error part (Vision error) A vision error occurs on the final recovery action, and the part is rejected. 4: NoPickup The pickup operation was attempted but the part could not be picked up on the final recovery action, and so the part remains unused. 5: Parts out In the case of a feeder, the recovery limit is reached after failing to pick up a part on all recovery attempts. In the case of a tray, the final part on a matrix tray is picked up. 10: There is a feeder type check error (pitch/width) 998: Processing error Note 999：Format error
	Quantity	Current remaining parts
	TrayCount	Quantity of trays (only for stacked tray parts.)
	TrayX	Pickup position X coordinate (only for tray parts)
	TrayY	Pickup position Y coordinate (only for tray parts)

Note: Dynamic alternate feeders and splicing cannot be performed for the same part in the same module at the same time. Be sure to set the resupply method in the "Supply" parameter in the FEEDERSETUP event. If both resupply methods are used at the same time, Nexim Host Interface will report to the machine that those slots cannot be used. When this occurs, a status of 998 is reported to the user host in the ERRORREPORT event.

Note 2: A fixed value of "0" for Quantity, TrayCount, TrayX, and TrayY when the status is 1 or 998or999 is reported.

Note 3: A fixed value of "0" for TrayCount, TrayX, and TrayY for tape parts is reported.

6.26.2 Error report reply (ERRORREPORT_ACK)

After Central Server Lite has sent the error report (ERRORREPORT) to the host computer, it waits for a reply message from the host computer.

Trigger	When the host computer receives a error report (ERRORREPORT).	
Direction	Host computer -> Central Server Lite	
Event message format	STX **ERRORREPORT_ACK** Tab SeqID Tab Result ETX	
Data items	SeqID	Sequence ID (1 ~ 999999) The requesting side is assigned a unique integer, and the replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0: OK 1: Not OK

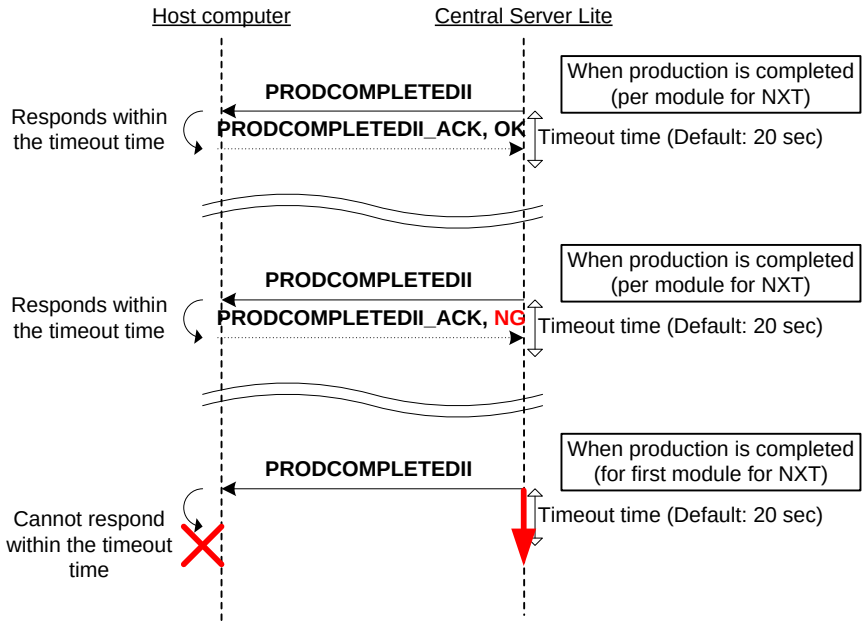
6.27 Production completed II

This section gives the format and sequence of messages when production is completed at a machine.
For the NXT, each module reports this information after it completes production.

When PRODCOMPLETEDII is reported, PRODCOMPLETED is not reported.

Basically when PRODCOMPLETEDII is specified in EventName for the valid event settings report (SETEV), PRODCOMPLETED is not reported even if it has been specified. (PRODCOMPLETEDII setting receives priority). However, if EventName is left blank, PRODCOMPLETED is reported.

Also, when the production completed II reply (PRODCOMPLETEDII_ACK) is NG or timeouts for this sequence, Central Server Lite subsequently processes the production completed II reply (PRODCOMPLETEDII_ACK) in the same manner as if it received an "OK" result.



6.27.1Production completed II (PRODCOMPLETEDII)

This report is sent when the machine completes production.

Trigger	After the machine finishes production (modules for NXT)	
Direction	Central Server Lite -> Host computer	
Event message format	STX**PRODCOMPLETEII**TabSeqIDTabTimeTabLineNameTabMachineNameTabModuleNoTabLaneNoTabProductModeTabProgramNameTabPanelNoTabBlockCountTabBlockSkipCountTabBSInfoBitTabCycleTimeETX	
Data items	SeqID	Sequence ID (1 ~ 999999) The requesting side is assigned a unique integer, and the replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	This is the date and time the event occurred. (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	ModuleNo	Module number (Refer to section 6.2)
	LaneNo	Conveyor name 1: Front side 2: Rear side
	ProductMode	Production mode o: Product 1: Pass
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B"
	PanelNo	Running number for produced panels NXTR : 1000000~24299999 Other : 0~9999999 For the NXT or NXTR, the same running number is reported by each module for a panel in the machine. When to reset the serial number - NXTR：Not cleared in principle. It is cleared in special cases such as when upgrading. - NXT：When a job with a different name is transmitted.
	BlockCount	Number of boards produced (0 to 9999)
	BlockSkipCount	Number of skipped boards (0 to 9999)

	BSInfoBit	Set skip condition for each board. Expressed in bits (0: produced, 1: skip). Because the data is reported in hexadecimal (ASCII code), the size is the maximum board number divided by 8 (rounded up from the decimal point). From the maximum bit in order is the set skip condition for the board numbers 1, 2, 3, ... Example: For a panel with 50 boards, boards 1, 3, 7, 12, and 34 were skipped. 1st byte = 0xA2, 2nd byte = 0x10, 3rd byte = 0x00, 4th byte = 0x00, 5th byte = 0x40, 6th byte = 0x00, 7th byte = 0x00,
	CycleTime	Time from when production of the applicable panel was started to when it was completed. This time is for each module.

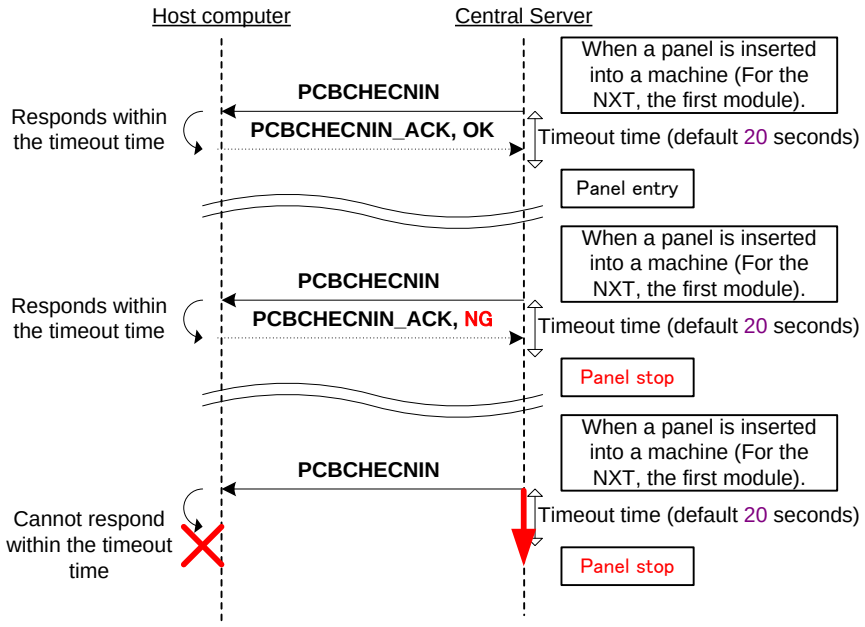
6.27.2Production completed II reply (PRODCOMPLETEDII_ACK)

After Central Server Lite has sent the production completed II report (PRODCOMPLETEDII) to the host computer, it waits for a reply message from the host computer.

Trigger	When the host computer receives a production completed II report (PRODCOMPLETEDII) (module in the case of the NXT)	
Direction	Host computer -> Central Server Lite	
Event message format	STX**PRODCOMPLETEDII_ACK**TabSeqIDTabResultTabMachineNameTabModuleNoTabLaneNoTabProductModeTabProgramNameTabPanelNoETX	
Data items	SeqID	Sequence ID (1 ~ 999999) The requesting side is assigned a unique integer, and the replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0: OK 1: Not OK
	MachineName	Machine name Echoes back the value from the requesting side.
	ModuleNo	Module number (Refer to section 6.2) Echoes back the value from the requesting side.
	LaneNo	Conveyor name 1: Front side 2: Rear side Echoes back the value from the requesting side.
	ProductMode	Production mode 0: Product 1: Pass Echoes back the value from the requesting side.
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B" Echoes back the value from the requesting side.
	PanelNo	Running number for produced panels NXTR : 1000000~24299999 Other : 0~9999999 For the NXT or NXTR, the same running number is reported by each module for a panel in the machine. When to reset the serial number - NXTR : Not cleared in principle. It is cleared in special cases such as when upgrading. - NXT : When a job with a different name is transmitted.

6.28 Panel Checkin

The sequence and message format when a panel is loaded in a machine is described below.



6.28.1 Panel checkin notification (PCBCHECKIN)

Reported when a panel is loaded into a machine.

Trigger	When a panel is loaded into a machine. (For the NXT, the first module)	
Direction	Central Server -> Host computer	
Event Message Format	STX**PCBCHECKIN**TabSeqIDTabTimeTabLineNameTabMachineNameTabLaneNoTabProgramNameTabPanelIDTabCriticalMslRemainingTimeETX	
Data Item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	Event date (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	LaneNo	Conveyor name 1: Front side 2: Rear side
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/bottom side identifier: Top:"_T" Bottom:"_B"
	PanelID	Panel ID (Barcode or 2D code identifier)
	CriticalMslRemaining Time	Shortest floor life remaining time(~~1~~**0**~999999) Units: minutes The shortest remaining floor life time among the parts specified for the machine.

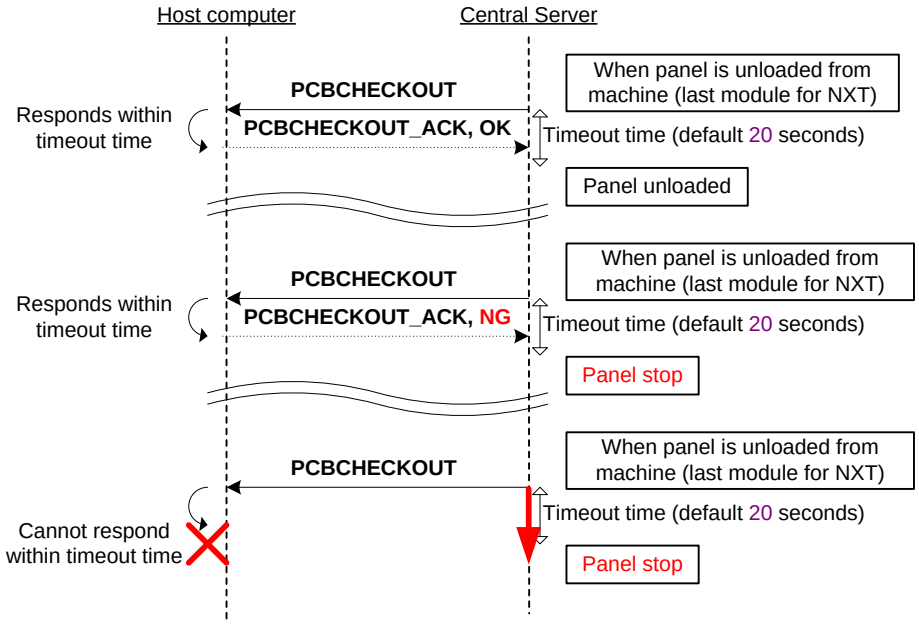
6.28.2 Panel checkin notification reply (PCBCHECKIN_ACK)

After the Central Server has sent the panel load notification reply (PCBCHECKIN) to the host computer, it waits for the reply message from the host computer.
If the host computer sends "1" (NG) as its panel load notification reply to the Central Server, the panel is not allowed to enter the machine.
If the host computer sends "0" (OK) as its panel load notification reply to the Central Server, the panel is allowed to enter the machine.

Trigger	When a panel is loaded into a machine. (For the NXT, the first module)	
Direction	Host computer -> Central Server	
Event Message Format	STX**PCBCHECKIN_ACK**TabSeqIDTabResultTabMachineNameTabLaneNoTabProgramNameTabPanelIDETX	
Data Item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0: OK 1: NG
	MachineName	Machine name. Echoes back the value from the request side.
	LaneNo	Conveyor name 1: Front side 2: Rear side Echoes back the value from the request side.
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/bottom side identifier: Top:"_T" Bottom:"_B" Echoes back the value from the request side.
	PanelID	Panel ID (Barcode or 2D code identifier) Echoes back the value from the request side.

6.29 Panel Checkout

The sequence and message format when a panel is unloaded from a machine is described below.



6.29.1 Panel Checkout Notification (PCBCHECKOUT)

When the machine has finished production, this is reported when the panel is unloaded.

Trigger	When a panel is unloaded from a machine. (For the NXT, the last module)	
Direction	Central Server -> Host computer	
Event Message Format	STX**PCBCHECKOUT**TabSeqIDTabTimeTabLineNameTabMachineNameTabLaneNoTabProgramNameTabPanelIDTabCriticalMslRemainingTimeTabPanelStatusTab **<UsedComponents>**	
Used Components Format	NumListCR ModuleNoTabStageNoTabSlotNoTabPartNoTabReelIDTabFeederIDTabPickupCountTab ErrorPartsTab RejectPartsTabDislodgedPartsTab NoPickupCR : ModuleNoTabStageNoTabSlotNoTabPartNoTabReelIDTabFeederIDTabPickupCountTab ErrorPartsTab RejectPartsTabDislodgedPartsTab NoPickupCR ETX	
Data Item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	Event date (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	LaneNo	Conveyor name 1: Front side 2: Rear side
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/bottom side identifier: Top:"_T" Bottom:"_B"
	PanelID	Panel ID (Barcode or 2D code identifier)
	CriticalMslRemainingTime	Shortest remaining floor life time (~~1~~0~999999) Unit: minutes The shortest remaining floor life time among the parts specified for the machine.
	PanelStatus	This value indicates whether or not production was completed for the last module when the panel was unloaded. 0: Completed 1: Not completed
	NumList	Data record number below
	ModuleNo	Module number (NXT:1~32)
	StageNo	Stage number (NXT:1 fixed)
	SlotNo	Slot number Feeder:1~45 per Module MTU-M(A):201~210 per Module MTU-M(B):301~310 per Module MTU-L:101~142 per Module
	PartNo	Part number (Code used for Nexim part verification)
	ReelID	Used reel ID (Unique ID)
	FeederID	Used feeder ID (Unique ID)
	PickupCount	The number of times the machine performed a pickup

	ErrorParts	The number of parts dumped due to a vision processing error.
	RejectParts	Includes parts that were rejected by the operator and parts that were still on a nozzle when production was stopped but no longer existed when production was restarted. (This is the number of parts rejected due to errors other than vision processing errors)
	DislodgedParts	The number of unplaced parts Displays the number of dropped parts. These parts were picked up but were dropped before vision processing and not placed
	NoPickup	Number of empty pickups Pickup was attempted for these parts but they could not be picked up. Since pickup was attempted in an area with no parts, no parts were used.

6.29.2 Panel Checkout Notification Reply (PCBCHECKOUT_ACK)

After the Central Server has sent the panel checkout notification (PCBCHECKOUT) to the host computer, it waits for the reply message from the host computer.
If the host computer sends "1" (NG) as its panel checkout notification reply (PCBCHECKOUT_ACK) to the Central Server, the panel is not allowed to be unloaded from the machine.
If the host computer sends "0" (OK) as its panel checkout notification reply (PCBCHECKOUT_ACK) to the Central Server, the panel is allowed to be unloaded from the machine.

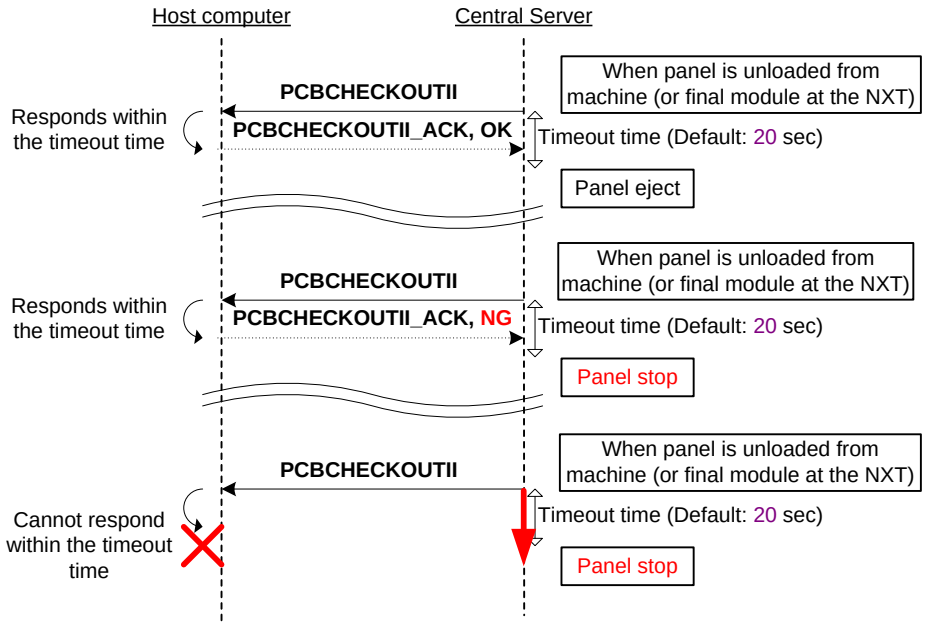
Trigger	When the host computer receives a panel checkout notification (PCBCHECKOUT) (In the case of the NXT, last module)	
Direction	Host computer -> Central Server	
Event Message Format	STX**PCBCHECKOUT_ACK**TabSeqIDTabResultTabMachineNameTabLaneNoTabProgramNameTabPanelIDETX	
Data Item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0: OK 1: NG
	MachineName	Machine name. Echoes back the value from the request side.
	LaneNo	Conveyor name 1: Front side 2: Rear side Echoes back the value from the request side.
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/bottom side identifier: Top:"_T" Bottom:"_B" Echoes back the value from the request side.
	PanelID	Panel ID (Barcode or 2D code identifier) Echoes back the value from the request side.

6.30 Panel checkout II

The sequence and message format for panel checkout notification II (PCBCHECKOUTII), which is used to report the pickup results for the placement sequences when a panel is unloaded from the machine, are described below.

A panel checkout notification (PCBCHECKOUT) is not sent when using panel checkout II notification (PCBCHECKOUTII).

In other words, when PCBCHECKOUTII is set (including blank) as the event name for valid event set notifications (SETEV), PCBCHECKOUT notifications will not be sent even if specified (the PCBCHECKOUTII setting takes priority).



6.30.1 Panel Checkout Notification II (PCBCHECKOUTII)

When the machine has finished production, this is reported when the panel is unloaded.

Trigger	When panel is unloaded from machine (or final module in the case of the NXT)	
Direction	Central Server -> Host computer	
Event message format	STX**PCBCHECKOUTII**TabSeqIDTabTimeTabLineNameTabMachineNameTabLaneNoTabProgramNameTabPanelIDTabCriticalMslRemainingTimeTabPanelStatusTab**<UsedComponentsII>**	
<Used ComponentsII> format	NumListCR SequenceNoTabModuleNoTabStageNoTabSlotNoTabPartNoTabReelIDTabFeederIDTabPickupStatusTabBlockNoTabReferenceCR : SequenceNoTabModuleNoTabStageNoTabSlotNoTabPartNoTabReelIDTabFeederIDTabPickupStatusTabBlockNoTabReferenceCR ETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	Time at which event occurred (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	LaneNo	Conveyor name 1: Front side 2: Rear side
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B"
	PanelID	Panel ID (Barcode or 2D code)
	CriticalMslRemainingTime	Shortest remaining floor life (0~999999) Unit: mins Shortest remaining floorlife among the parts set on the machine.
	PanelStatus	Indicates whether a panel was completed at the final module without being removed beforehand. 0: Panel was completed. 1: Panel was not completed.
	NumList	Number of data records
	SequenceNo	Sequence number (1~99999) Sequence number specified in the program.
	ModuleNo	Module number (NXT:1~32)
	StageNo	Stage number (NXT: Fixed at 1)
	SlotNo	Slot number Feeder: 1~45 per Module MTU-M(A): 201~210 per Module MTU-M(B): 301~310 per Module MTU-L: 101~142 per Module
	PartNo	Part number (Code used for Nexim parts verification)
	ReelID	Reel ID (Unique ID)
	FeederID	Feeder ID (Unique ID)

	PickupStatus	Pickup operation result 0: Normal 1: Error part (Vision error) An error occurred at the time of vision processing and the part was rejected. 2: Reject part Operator rejects a part using manual commands, or a part still held by a nozzle following interruption of production is rejected when production resumes. (Parts that are rejected for reasons other than vision errors) 3: Dropped part A part is dropped at some point between pickup and vision processing, and could not be placed. 4: Unused part Part could not be picked up. The part remains unused because the part was not present at the pickup position.
	BlockNo	Block number (1~1000)
	Reference	Reference designator

6.30.2 Panel checkout notification II reply (PCBCHECKOUTII_ACK)

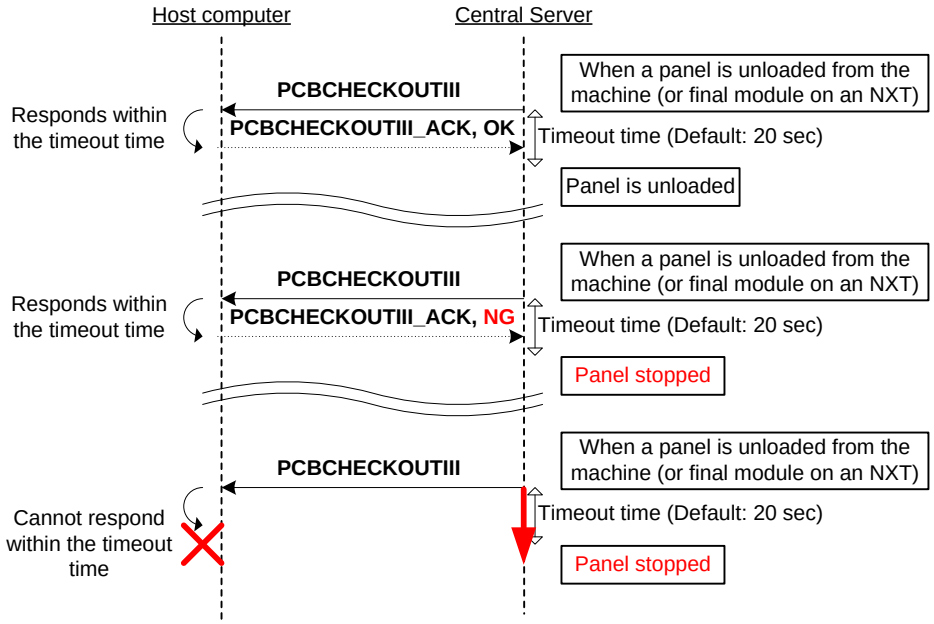
After Central Server has sent the panel checkout notification II (PCBCHECKOUTII) event to the host computer, it waits for a reply message from the host computer.
When the host computer replies to Central Server with "1" (NG) as the panel checkout notification reply (PCBCHECKOUTII_ACK), that panel is not unloaded.
When the host computer replies to Central Server with "0" (OK) as the panel checkout notification reply (PCBCHECKOUTII_ACK), that panel is unloaded.

Trigger	When the host computer receives a panel checkout II notification (PCBCHECKOUTII) (In the case of the NXT, last module)	
Direction	Host computer -> Central Server	
Event message format	STX**PCBCHECKOUTII_ACK**TabSeqIDTabResultTabMachineNameTabLaneNoTabProgramNameTabPanelIDETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0: OK 1: NG
	MachineName	Machine name Echoes back the value for the requesting side.
	LaneNo	Conveyor name 1: Front side 2: Rear side Echoes back the value for the requesting side.
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B" Echoes back the value for the requesting side.
	PanelID	Panel ID (barcode or 2D code) Echoes back the value for the requesting side.

6.31 Panel checkout III

The sequence and message format for panel checkout III (PCBCHECKOUTIII), which is used to report the pickup results for the placement sequences when a panel is unloaded from the machine, are described below.

Both the panel checkout reports (PCBCHECKOUT) and panel checkout II reports (PCBCHECKOUTII) are not sent when using panel checkout III reports (PCBCHECKOUTIII). In other words, when PCBCHECKOUTIII is set as the event name for valid event set reports (SETEV), PCBCHECKOUT and PCBCHECKOUTII reports will not be sent even if specified. (The PCBCHECKOUTIII setting takes priority.) However, if the setting is left blank, then PCBCHECKII is reported.



6.31.1 Panel checkout III report (PCBCHECKOUTIII)

When the machine has finished production, this is reported when the panel is unloaded.

Trigger	When a panel is unloaded from the machine (or final module in the case of the NXT)	
Direction	Central Server -> Host computer	
Event message format	STX**PCBCHECKOUTIII**TabSeqIDTabTimeTabLineNameTabMachineNameTabLaneNoTabProgramNameTabPanelIDTabCriticalMslRemainingTimeTabPanelStatusTab**<UsedComponentsIII>**	
<Used Components III> format	NumListCR SequenceNoTabModuleNoTabStageNoTabSlotNoTabPartNoTabReelIDTabFeederIDTabPickupStatusTabBlockNoTabReferenceTabVendorTabLotNoTabDateCodeTabLIghtingclassCR : SequenceNoTabModuleNoTabStageNoTabSlotNoTabPartNoTabReelIDTabFeederIDTabPickupStatusTabBlockNoTabReferenceTabVendorTabLotNoTabDateCodeTabLIghtingclassCR ETX	
Data items	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Time	Time at which event occurred (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	LaneNo	Conveyor name 1: Front side 2: Rear side
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B"
	PanelID	Panel ID (Barcode or 2D code identifier)
	CriticalMslRemainingTime	Shortest remaining floor life (0~999999) Unit: mins Shortest remaining floorlife among the parts set on the machine.
	PanelStatus	Indicates whether a panel was completed at the final module without being removed beforehand. 0: Panel was completed. 1: Panel was not completed.
	NumList	Number of data records
	SequenceNo	Sequence number (1~99999) Sequence number specified in the program.
	ModuleNo	Module number (NXT:1~32)
	StageNo	Stage number (NXT: Fixed at 1)
	SlotNo	Slot number Feeder: 1 to 45 per module TU-M(A): 201 to 210 per module TU-M(B): 301 to 310 per module TU-L: 101 to 142 per module
	PartNo	Part number (Code used for Nexim parts verification)
	ReelID	Reel ID (Unique ID)
	FeederID	Feeder ID (Unique ID)

	PickupStatus	Pickup operation result 0: Normal 1: Error part (Vision error) An error occurred at the time of vision processing and the part was rejected. 2: Reject part Operator rejects a part using manual commands, or a part still held by a nozzle following interruption of production is rejected when production resumes. (Parts that are rejected for reasons other than vision errors) 3: Dropped part A part is dropped at some point between pickup and vision processing, and could not be placed. 4: Unused part Part could not be picked up. Since pickup was attempted in an area with no parts, no parts were used.
	BlockNo	Block number (1 to 1000)
	Reference	Reference designator
	Vendor	Part vendor name
	LotNo	Part lot number
	DateCode	Date code for the part
	Lightingclass	Lighting class

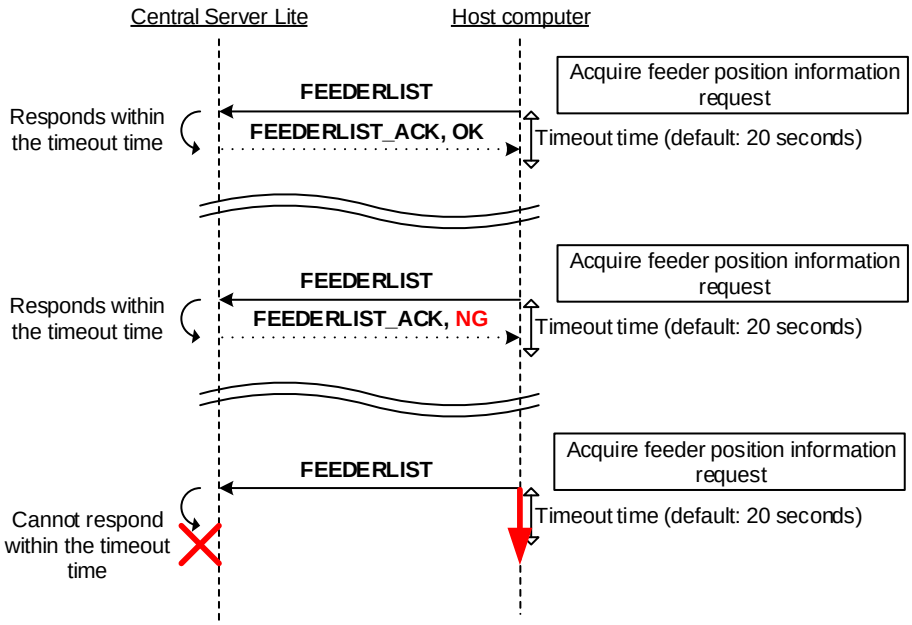
6.31.2 Panel checkout III report reply (PCBCHECKOUTIII_ACK)

After Central Server has sent the panel checkout III report (PCBCHECKOUTIII) event to the host computer, it waits for a reply message from the host computer.
When the host computer replies to Central Server with "1" (NG) as the panel checkout III report reply (PCBCHECKOUTIII_ACK), that panel is not unloaded.
When the host computer replies to Central Server with "0" (OK) as the panel checkout III report reply (PCBCHECKOUTIII_ACK), that panel is unloaded.

Trigger	When the host computer receives a panel checkout III report (PCBCHECKOUTIII) (In the case of the NXT, the last module)	
Direction	Host computer -> Central Server	
Event message format	STX**PCBCHECKOUTIII_ACK**TabSeqIDTabResultTabMachineNameTabLaneNoTab ProgramNameTabPanelIDETX	
Data item	SeqID	Sequence ID (1~999999) Requesting side is assigned a unique integer, and replying side echoes back this value. When the maximum value is reached, the count returns to 1.
	Result	Result 0: OK 1: NG
	MachineName	Machine name Echoes back the value for the requesting side.
	LaneNo	Conveyor name 1: Front side 2: Rear side Echoes back the value for the requesting side.
	ProgramName	Program name Format: Job name+Top/Bottom side identifier+Revision Top/Bottom side identifier Top: "_T" Bottom: "_B" Echoes back the value for the requesting side.
	PanelID	Panel ID (barcode or 2D code) Echoes back the value for the requesting side.

6.32 Acquire feeder position information

The sequence and message format when the host computer requests Central Server Lite to acquire feeder position information for the next job to produce are described below.



6.32.1 Acquire feeder position information request (FEEDERLIST)

Trigger	When the host computer requests to acquire feeder position information for the next job to produce.	
Direction	Host computer -> Central Server Lite	
Event message format	STX **FEEDERLIST** Tab SeqID Tab Time Tab LineName Tab MachineName Tab GroupName Tab ProgramName ETX	
Data items	SeqID	Sequence ID (1 to 999999) Requesting side is assigned a unique integer, and replying side echo-backs this value. When the maximum value is reached, the count returns to 1.
	Time	Time at which event occurred (YYYYMMDDhhmmss)
	LineName	Line name
	MachineName	Machine name
	GroupName	Job group name When the job group name is not known, specify GroupName=" " (do not set anything). When this is set, Fuji Flexa searches through all of the groups for the job and acquires the feeder position information. However, there are cases in which the reply takes longer.
	ProgramName	Program name Format: Job name + Top/Bottom side identifier + Revision Top/Bottom side identifier Top: ”_T” Bottom: ”_B”

6.32.2 Acquire feeder position information request reply (FEEDERLIST_ACK)

Trigger	When Central Server Lite receives the acquire feeder position information request.	
Direction	Central Server Lite -> Host computer	
Event message format	STX**FEEDERLIST_ACK**TabSeqIDTabResultTabMachineNameTabGroupNameTabProgramName**<**FeederData**>**ETX	
<FeederData> format	NumListCR ModuleNoTabStageNoTabSlotNoTabFeederNameTabQTYTab**<UsedPG>**Tab**<UsedBOM2>**CR : ModuleNoTabStageNoTabSlotNoTabFeederNameTabQTYTab**<UsedPG>**Tab**<UsedBOM2>**CR	
<UsedPG> format	NumList2CR PartNoCR : PartNoCR	
<UsedBOM2> format	NumList3CR ReferenceCR : ReferenceCR	
Data items	SeqID	Sequence ID (1 to 999999) Requesting side is assigned a unique integer, and replying side echo-backs this value. When the maximum value is reached, the count returns to 1.
	Result	Acquire feeder position information result 0: Normal xxxx: Error code (hexadecimal) 1: Error (not connected to Fuji Flexa)
	MachineName	Machine name Echoes back the value for the requesting side.
	GroupName	Job group name Echoes back the value for the requesting side.
	ProgramName	Program name Format: Job name + Top/Bottom side identifier + Revision Top/Bottom side identifier Top: ”_T” Bottom: ”_B” Echoes back the value for the requesting side.
	NumList	Number of data records
	ModuleNo	Module number (NXT: 1 to 32, XPF: 1) Echoes back the value for the requesting side.
	StageNo	Stage number (NXT: 1 (Fixed value)) Echoes back the value for the requesting side.

	SlotNo	Slot number ・ For NXT machines Feeder: 1 to 45 per module MTU-M (A): 201 to 210 per module MTU-M (B): 301 to 310 per module MTU-L: 101 to 142 per module MTU-LT: 901 to 948 per module MTU-LTC: 1001 to 1024 per module TFM(A): 401 to 506 per module TFM(B): 501 to 506 per module TFM(C): 601 to 606 per module TFM(D): 1301 to 1306 per module TFL(A): 701 to 706 per module TFL(B): 801 to 806 per module TFL(C): 1401 to 1406 per module
	FeederName	Feeder name
	QTY	Quantity of parts used for each panel
	NumList2	Number of data records
	PartNo	Part number
	NumList3	Number of data records
	Reference	Reference designator

Regarding results

- When it is "xxxx: error code", this is reporting the Fuji Flexa error code to the user host in hexadecimal format.
- When it is "1: error", this is reporting that the Fujitrax Host Interface computer is not connected to Fuji Flexa. Check the connection condition and settings between Fujitrax Host Interface and Fuji Flexa.

Note: It is not possible to output the feeder position for the job that has not been transmitted to the machine. In addition, the acquired feeder position information is for when transmitting.