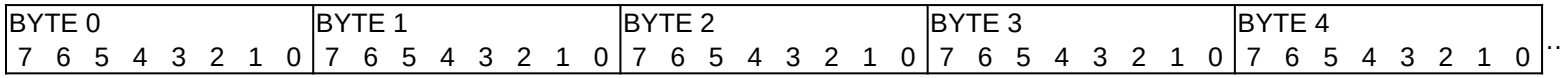
VERSION **17**
DATE **2020-05-25**

Packet length is 1..255 bytes. Transport layer must handle byte and packet framing.



Packet header ↴

T2 packet *STND* ↴

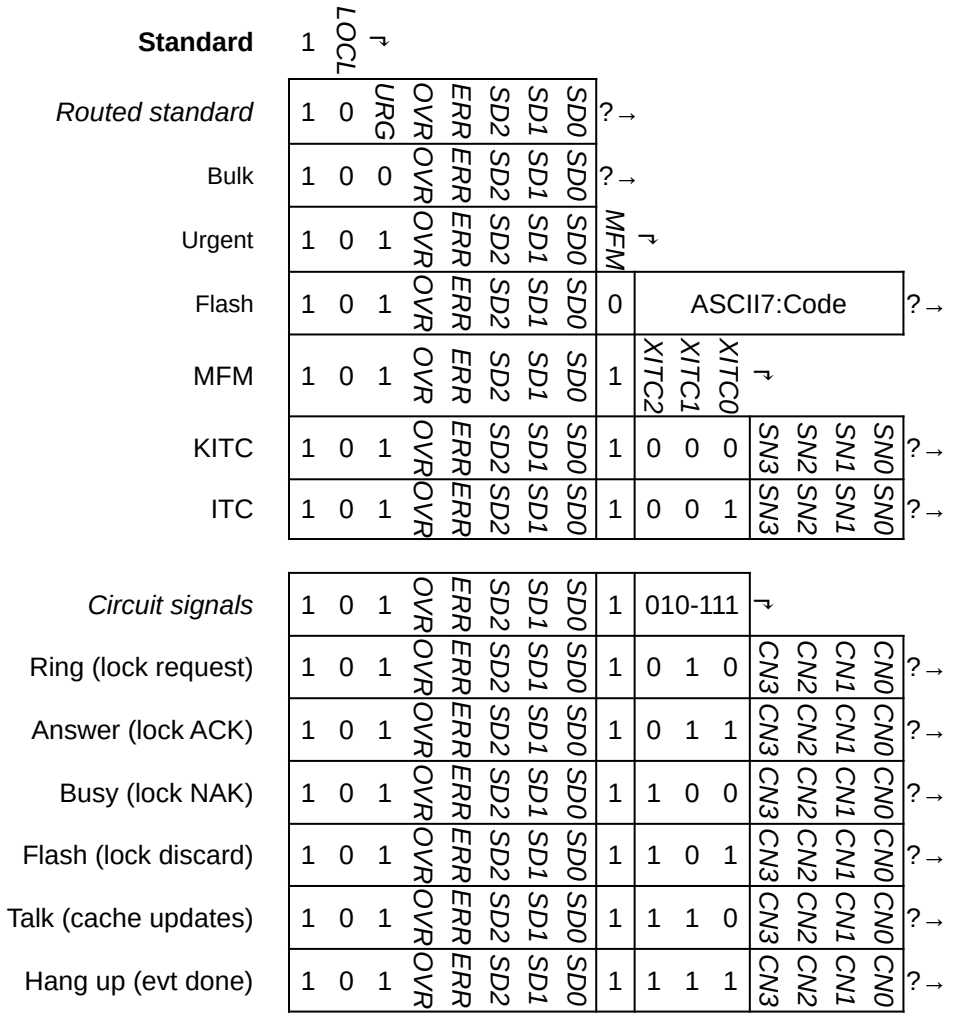
Non-standard 0 | ASCII7 ?→

Standard 1 *LOCL* ↴

Local standard 1 1 *RSV0* *TYP4* *TYP3* *TYP2* *TYP1* *TYP0* ↴

Local standard packets are defined per source/destination

PRU→PRU	Not used
PRU→LKM	Page 3 ↴
LKM→PRU	Page 3 ↴
LKM→MFM	Page 3 ↴
MFM→LKM	Page 3 ↴


Standard
1 LOCL ↱
Routed standard
1 0 URG OVR ERR SD2 SD1 SD0 ?→
Bulk
1 0 0 OVR ERR SD2 SD1 SD0 ?→
Urgent
1 0 1 OVR ERR SD2 SD1 SD0 MFM ↱
Flash
1 0 1 OVR ERR SD2 SD1 SD0 0 ASCII7:Code ?→
MFM
1 0 1 OVR ERR SD2 SD1 SD0 1 XITC2 XITC1 XITC0 ↱
KITC
1 0 1 OVR ERR SD2 SD1 SD0 1 0 0 0 SN3 SN2 SN1 SN0 ?→
ITC
1 0 1 OVR ERR SD2 SD1 SD0 1 0 0 1 SN3 SN2 SN1 SN0 ?→
Circuit signals
1 0 1 OVR ERR SD2 SD1 SD0 1 010-111 ↱
Ring (lock request)
1 0 1 OVR ERR SD2 SD1 SD0 1 0 1 0 CN3 CN2 CN1 CN0 ?→
Answer (lock ACK)
1 0 1 OVR ERR SD2 SD1 SD0 1 0 1 1 CN3 CN2 CN1 CN0 ?→
Busy (lock NAK)
1 0 1 OVR ERR SD2 SD1 SD0 1 1 0 0 CN3 CN2 CN1 CN0 ?→
Flash (lock discard)
1 0 1 OVR ERR SD2 SD1 SD0 1 1 0 1 CN3 CN2 CN1 CN0 ?→
Talk (cache updates)
1 0 1 OVR ERR SD2 SD1 SD0 1 1 1 0 CN3 CN2 CN1 CN0 ?→
Hang up (evt done)
1 0 1 OVR ERR SD2 SD1 SD0 1 1 1 1 CN3 CN2 CN1 CN0 ?→

Local standard ***PRU→LKM***

illegal	1	1	*	0	0	0	0	0	?→							
debug	1	1	*	0	0	0	0	1	?→							
value	1	1	*	0	0	0	1	0	?→							
control	1	1	*	0	0	0	1	1	0	ASCII7:Code	0	ASCII7:PRU	0	ASCII7:DIR		
Packet sync	1	1	*	0	0	0	1	1	0	'P'	0	'0'..'1'	0	'0'..'2'		
Frame error	1	1	*	0	0	0	1	1	0	'F'	0	'0'..'1'	0	'0'..'2'		
Timeout	1	1	*	0	0	0	1	1	0	'T'	0	'0'..'1'	0	'0'..'2'		
Monitor	1	1	*	0	0	0	1	1	0	'M'	0	'0'..'1'	0	'3'	0 0 0 0 0	EN2 EN1 EN2
reserved	1	1	*	0	0	0	1	1	0	..all other values..	0	'0'..'1'	0	'0'..'3'	?→	
reserved	1	1	*	0	0	0	1	1	1	?→						
reserved	1	1	*	0	0	1	x	x	?→							
reserved	1	1	*	0	1	x	x	x	?→							
reserved	1	1	*	1	x	x	x	x	?→							

Local standard ***LKM→PRU***

reserved	1	1	*	x	x	x	x	x	?→

Note: LKM→PRU uses non-standard packets rather than STNDLOCL. See T2-12/pru/itcio/firmware/SpecialPackets.c for details

Local standard ***LKM→MFM***

illegal	1	1	*	0	0	0	0	0	?→
reserved	1	1	*	0	0	0	0	1	?→
reserved	1	1	*	0	0	0	1	x	?→
reserved	1	1	*	0	0	1	x	x	?→
reserved	1	1	*	0	1	x	x	x	?→
reserved	1	1	*	1	x	x	x	x	?→

Local standard ***MFM→LKM***

illegal	1	1	*	0	0	0	0	0	?→
reserved	1	1	*	0	0	0	0	1	?→
reserved	1	1	*	0	0	0	1	x	?→
reserved	1	1	*	0	0	1	x	x	?→
reserved	1	1	*	0	1	x	x	x	?→
reserved	1	1	*	1	x	x	x	x	?→

Abbreviations:	Code:	Meaning
	?	Optional data not defined by this spec
	*	Reserved, should ignore on read, should be 0 on write
	→	For rest of packet
	↴	Defined below
	ACT	Active, sender is performing an event
	CTL	Circuit control packet
	CNn	Circuit number, bit *n*
	ENn	Enable status bit, prudir *n*
	ERR	Error, corrupted packet
	ITC	Intertile Connection
	KITC	Kernel Intertile Connection
	LOCL	Local packet moving PRU ↔ ARM, but not PRU ↔ PRU
	MFM	Movable Feast Machine
	n	Bit index counting from least significant bit is 0
	OVR	Overrun, packet too long
	RSVn	Reserved, bit *n*
	SDn	Packet source direction on read, destination direction on write, bit *n*
	SNn	State number, bit *n*
	STND	Standard packet format, defined by this spec
	TYPn	Type code, bit *n*
	URG	Urgent
	x	0 or 1
	XITC	Extended ITC