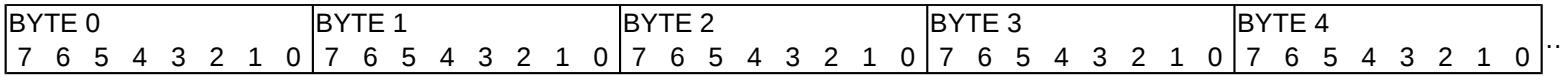
VERSION **15**
DATE **2020-05-13**

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



Packet header ↴

T2 packet *STND* ↴

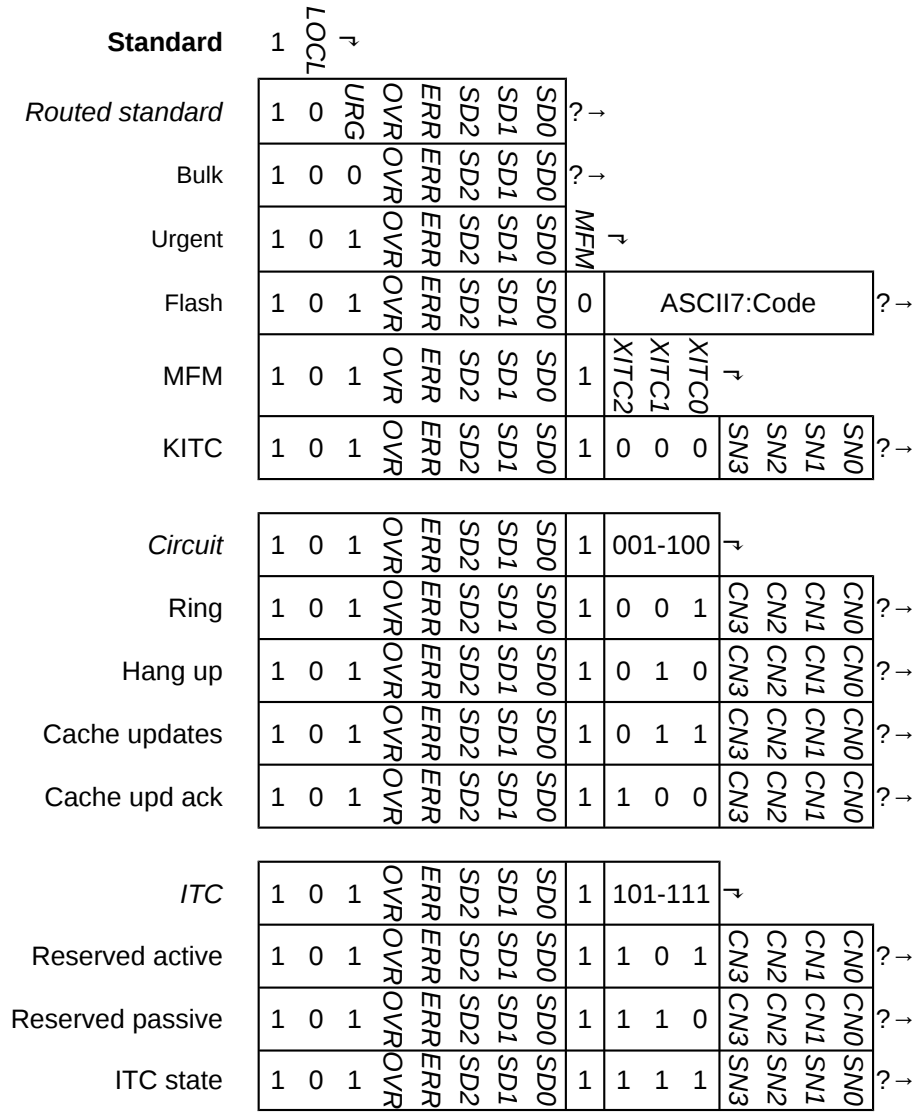
Non-standard 0 | ASCII7 ?→

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
Routed standard
Bulk
Urgent
Flash
MFM
KITC
Circuit
Ring
Hang up
Cache updates
Cache upd ack
ITC
Reserved active
Reserved passive
ITC state
LOCL
URG
MFM
ASCII7:Code
001-100
101-111
XITC2
XITC1
XITC0
SN3
SN2
SN1
SN0
CN3
CN2
CN1
CN0
SD2
SD1
SD0
ERR
OVR

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	?→
MFZID Compatible	1	1	*	0	0	0	0	1	
MFZID Incompatible	1	1	*	0	0	0	1	0	
reserved	1	1	*	0	0	0	1	1	?→
reserved	1	1	*	1	1	1	x	x	?→

Local standard ***MFM→LKM***

illegal	1	1	*	0	0	0	0	0	?→
Ping	1	1	*	0	0	0	0	1	
reserved	1	1	*	0	0	0	1	0	
reserved	1	1	*	0	0	0	1	1	?→
reserved	1	1	*	1	1	1	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