

MTX Node Ring Notes

Node Variables

Name	Address	Description
RCVFLG	F010	Receiver status: 0 = Not in packet 1 = Start of packet received 2 = Data packet 3 = Data packet, >=5 characters, first byte of ID matches 4 = Data packet, not addressed to node 5 = Data packet >=5 characters, addressed to node 6 = Control or program packet
SYNFLG	F014	Packet syntax flag: 0 = No error 2 = Declared packet length does not match received length 4 = Checksum error 8 = Packet type 5, length not 3 bytes

Packet Format

Control Packets

Offset	Length	Content	Description
0	1	0x02	Start of packet
1	1	Packet type	0x31 ("1") = Initiate packet 0x32 ("2") = Master packet 0x35 ("5") = Null packet (next character is EOP) 0x37 ("7") = Ring abort / ring error 0x38 ("8")= Master abort / master error
4	12	Source Name	Name of sending node
16	2	Source ID	ID of sending node (hex encoded)
18	2	Hop count?	Number of nodes in the ring?
*	4	Checksum	Hex encoded 16 bit sum of the packet contents, including packet type
*	1	0x1A	End of packet (EOP)

Program & Data Packets

Offset	Length	Content	Description
0	1	0x02	Start of packet
1	1	Packet type	0x39 ("9") = Program 0x41 ("A") = Data

Offset	Length	Content	Description
2	2	Packet length	Hex encoded
*	*	Data	Hex encoded binary data
*	4	Checksum	Hex encoded 16 bit sum of the binary length and binary data
*	1	0x1A	End of packet

Example Ring Traffic

Ring Initiation

At node "Alpha"

Type in: node name,"alpha"

Transmit 0 <Ctrl+Z>, 0 NULL packets, 0 Out of packet characters

Transmit Ring Packet:

119ALPHA 0101FC5D

Receive 0 <Ctrl+Z>, 0 NULL packets, 0 Out of packet characters

Receive Ring Packet:

119ALPHA 0102FC5C

Transmit 61 <Ctrl+Z>, 0 NULL packets, 0 Out of packet characters

Transmit Ring Packet:

219ALPHA 0201FC5B

Receive 0 <Ctrl+Z>, 0 NULL packets, 0 Out of packet characters

Receive Ring Packet:

219ALPHA 0202FC5A

Receive 17687 <Ctrl+Z>, 527 NULL packets, 0 Out of packet characters

Receive Ring Packet:

319BETA 0201FC84

Transmit 19675 <Ctrl+Z>, 528 NULL packets, 0 Out of packet characters

Transmit Ring Packet:

319BETA 0202FC83

At node "Beta"

Receive 0 <Ctrl+Z>, 0 NULL packets, 0 Out of packet characters

Receive Ring Packet:

119ALPHA 0101FC5D

Transmit 0 <Ctrl+Z>, 0 NULL packets, 0 Out of packet characters

Transmit Ring Packet:

119ALPHA 0102FC5C

Receive 61 <Ctrl+Z>, 0 NULL packets, 0 Out of packet characters

Receive Ring Packet:

219ALPHA 0201FC5B

Transmit 0 <Ctrl+Z>, 0 NULL packets, 0 Out of packet characters

Transmit Ring Packet:

219ALPHA 0202FC5A

Type in: node name,"beta"

Transmit 17687 <Ctrl+Z>, 527 NULL packets, 0 Out of packet characters
Transmit Ring Packet:
319BETA 0201FC84
Receive 19675 <Ctrl+Z>, 528 NULL packets, 0 Out of packet characters
Receive Ring Packet:
319BETA 0202FC83

Testing Commands

Type in: node name,"alpha"
Transmit 0 <Ctrl+Z>, 0 NULL packets, 0 Out of packet characters
Transmit Ring Packet:
119ALPHA 0101FC5D
Receive 0 <Ctrl+Z>, 0 NULL packets, 0 Out of packet characters
Receive Ring Packet:
119ALPHA 0102FC5C
Transmit 139 <Ctrl+Z>, 0 NULL packets, 0 Out of packet characters
Transmit Ring Packet:
219ALPHA 0201FC5B
Receive 0 <Ctrl+Z>, 0 NULL packets, 0 Out of packet characters
Receive Ring Packet:
219ALPHA 0202FC5A
Type in: node enter
Transmit 11741 <Ctrl+Z>, 361 NULL packets, 0 Out of packet characters
Transmit Ring Packet:
419ALPHA 0101FC5A
Receive 19043 <Ctrl+Z>, 361 NULL packets, 0 Out of packet characters
Receive Ring Packet:
419ALPHA 0102FC59
Receive 0 <Ctrl+Z>, 0 NULL packets, 0 Out of packet characters
Receive Ring Packet:
3192 0201FD0E
Transmit 88 <Ctrl+Z>, 1 NULL packets, 0 Out of packet characters
Transmit Ring Packet:
3192 0202FD0D
Receive 13336 <Ctrl+Z>, 325 NULL packets, 0 Out of packet characters
Receive Ring Packet:
319BETA 0201FC84
Transmit 27089 <Ctrl+Z>, 325 NULL packets, 0 Out of packet characters
Transmit Ring Packet:
319BETA 0202FC83
Type in: node message,"beta","hello"
Transmit 37642 <Ctrl+Z>, 736 NULL packets, 0 Out of packet characters
Transmit Ring Packet:
A1F02010180910548454C4C4FFD53
Receive 32920 <Ctrl+Z>, 737 NULL packets, 0 Out of packet characters
Receive Ring Packet:
A1701020100A9011BFF20
Type in: let m\$="you have mail"
Type in: node post,"beta",m\$
Transmit 112232 <Ctrl+Z>, 1382 NULL packets, 0 Out of packet characters

Transmit Ring Packet:
A4302010180928D2020202020200D000D594F552048415645204D41494CF99
C

Receive 32481 <Ctrl+Z>, 1382 NULL packets, 0 Out of packet characters

A1701020100A9011DFF1E

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Type in: node program,"beta",run
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Transmit 119988 <Ctrl+Z>, 1872 NULL packets, 0 Out of packet characters

AA50201010096B4017BFA01D000004000C001C001C001C04BFB0000000000C9C
900000001FF80FFD74BFB48FDC367F1C37FF1C90000C90000F40000F4000004
00F400000000000000000000000000E8BD

Receive Ring Packet:

Transmit 905 <Ctrl+Z>, 1 NULL packets, 0 Out of packet characters

[illegible]

Receive Ring Packet:

Transmit 599 <Ctrl+Z>, 1 NULL packets, 0 Out of packet characters

[illegible]

Receive Ring Packet:

Transmit 532 <Ctrl+Z>, 1 NULL packets, 0 Out of packet characters

A450201048096B4017BFA01D00000100000000000000D8FA0000000040800000F901

Receive Ring Packet:

Transmit 569 <Ctrl+Z>, 1 NULL packets, 0 Out of packet characters

A450201018097B401000000100000100F000A00902254455354494E4722FF40F

Receive Ring Packet:

Transmit 699 <Ctrl+Z>, 1 NULL packets, 0 Out of packet characters

A270201018098B40100C00101000001FFFC46

Receive Ring Packet:

1117 01020100010001000100

Type in: node suspend

Transmit 41058 <Ctrl+Z>, 778 NULL packets, 0 Out of packet characters

Transmit Ring Packet:

019ALPHA 0101FC5E

Receive 18599 <Ctrl+Z>, 778 NULL packets, 0 Out of packet characters

Receive Ring Packet:

019ALPHA 0102FC5D

Type in: node cont

Type in: node ext,"beta",255,255

Transmit 77103 <Ctrl+Z>, 897 NULL packets, 0 Out of packet characters

Transmit Ring Packet:

A1B020101808FFFFFF0100FCD3

Receive 36865 <Ctrl+Z>, 897 NULL packets, 0 Out of packet characters

Receive Ring Packet:

A1701020100A90119FF22