

Function

Measurement mode	: Continues / Window
Measurement time setting	
Pre-guard	: 250ms fixed
Guard time	: 10ms – 1000ms
Loss time	: 1.75s
Cycle speed time	: 1min, 2min, 5min, 10min
(Window mode only)	
Number of Windows	: 1, 2 – 32 EVEN number
Packet capture function	
Capture filter	: Packet filter / Data filter
Packet filter	: Capture a selected packet
Number of filter	: Two independently, each UP/Down direction
Number of filter steps	: 32bit x 16step
Setting condition	: mask each bit and set and or not condition
Offset condition	: IPv4 length, TCP_offset
Data filter	: selected data can be saved
Number of filter step	: 32bit x 16 step
Analysis function	
1) Each packet latency (Measurement items)	: Output by each filter, by each packet : Paket captured time One way latency Packet dump
2) Latency statistic information (Measurement items)	: Output by each filter, by cycle time : Average latency, Maximum, Minimum Delay jitter Number of loss packet / percentage of loss packet Total number of captured packets Number or match packet
3) Traffic information (Measurement items)	: Output by each probe, each cycle repeat time : Number of toral captured packet (including error packet) Number of total captured byte (including error packet) Number of total captured error packet Number of passed packet through filter A Number of passed data byte through filter A Number of passed packet through filter B Number of passed data byte through filter B
Output Function (analysis result)	
1) File output (CSV format)	: Latency per packet / Latency statistic information / Traffic information
2) SNMP MIB output	: Latency statistic information / Traffic information
Time adjustment function	
NTP	: Adjust time by Time information from NTP server no network
GPS	: Adjust time by GPS time server
External Ipps Input	: Adjustment time by combination of NTP server with external Ipps signal
External reference input	: Synchronizes with 1MHz, 5MHz, 10MHz and 12.8MHz frequency signals
Time stamp function	: Add time stamp to sach captured packet
Time zone	: GMT
Time resolution	: 50uS
Time measurement point	: head of passed packet
Time accuracy	
NTP server	: $\pm x 1.3 \times 10^6 \pm t \times 1 \times 10^6$ year \pm Error of NTP server t[s] means interval period to adjust time for a NTP server For example, adjust time for a NTP server every 15 minutes (900s) $\pm 2.34\text{ms} \pm 1.8\text{ms} / \text{year} \pm$ error of NTP server
GPS	: $\pm 60 \mu\text{s} \pm$ GPS Ipps signal accuracy
(FURUNO TS-820	: Ipps internal signal accuracy $\pm 1 \mu\text{s}$ ($\pm 95\%$ probability))
External synchronize signal	: $\pm 60 \mu\text{s} \pm$ extrenal Ipps signal accuracy

External interface

Measurement interface	
Connector type	: PORT1, PORT2
Bit rate	: RJ-45 x 2
100BASE-TX/10BASE-T switch	: 100Mbps (100BASE-TX) / 10Mbps (10BASE-T), Duplex
Port type (alternative of following two settings)	: Select : (1) Packets pass through two ports (Data pass through when seitched off) : (2) Termination port (for mirror port)
Control port	: PORT3
Connector type	: RJ-45 x 1
Bit rate	: 100Mbps (100BASE-TX) / 10Mbps (10BASE-T)
100BASE-TX / 10BSE-T switch	: Auto negotiation or 100M/10M, Full/Half duplex
Console interface	: CONSOLE
Connector	: Dsub – 9pin male
Electrical specification	: Comply with EIA RS232C
Synchrization method	: Start & Stop synchronization
Baud rate	: 9600
Interface for synchronized signal	
GPS module signal	: GPS
Connector type	: Dsub – 9pin male
Baud rate	: 4800
Ipps signal input/output	: Ipps
Input/output level	: TTL level
Connector type	: BNC female
Reference Clock signal input	: REF
Input level	: TTL level
Input frequency	: 1M/5M/10M/12.8MHz
Connector type	: BNC female

General specifications

Warm up time	: more than 5 minutes
Power supply Voltage	: 100 – 240VAC
Power supply frequency	: 48 – 63Hz
Power requirement	: 30VA
Operating temperature	: 5 – 40
Operating	: 20 – 80%RH
Dimension	: 214(W) x 45(H) x 400(D)mm 1U rack mount
Weight	: approximately 2kg

System requirement for QoS manager software

PC specification	: Pentium 800MHz, Memory 512MB
Operating system	: Windows2000 Pro SP2, SP3

Performance of QoS manager software rely on a PC specification.
Under following condition, QoS manager software can handle 10000 packets/s.
5 pair of probes (10 units probes), continues mode, 32bit x 3steps data filter,
Snmp MIB output and binary type file output.
(In some network condition, manager software can not achieve.)

Model and Suffix Code

model	Description
730110	QoS probe, IQ10000
730160	QoS manager software
730189-E1S	Rack mounting kit for EIA, Single mounting
730189-E1W	Rack mounting kit for EIA, Duoble mounting

Minimum system configuration consist of two QoS probes and QoS manager software



NOTICE

- * Before operating the product, read the instruction manual thoroughly for proper and safe operation.
- * If this product is for use with a system requiring safeguards that directly involve personnel safety, please contact the Yokogawa sales office.