



RNMU

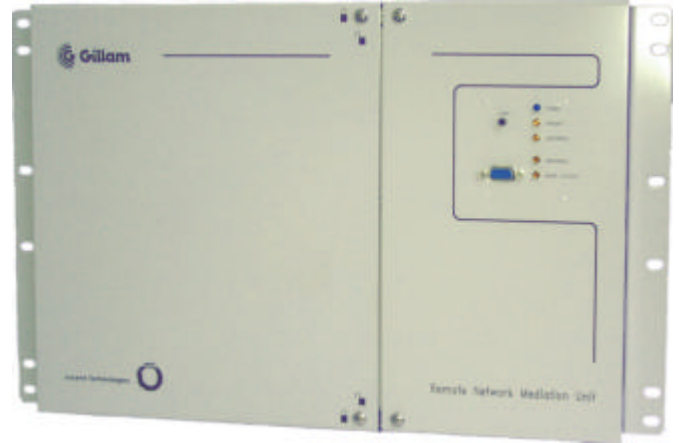
Adaptator or mediation device

RNMU, Q ADAPTATOR (QA) OR MEDIATION DEVICE FOR TELECOMMUNICATION MANAGEMENT NETWORK

The RNMU (Remote Network Mediation Unit), developed by GILLAM-FEI, is a key element in a Telecommunication Management Network (TMN).

The basic concepts of TMN have been defined by the ITU-T. Operation Systems (OS) manage Network Elements (NE) of different nature (PABX, transmission equipments, acquisition device,...) and from different manufacturers via a standard "Q interface".

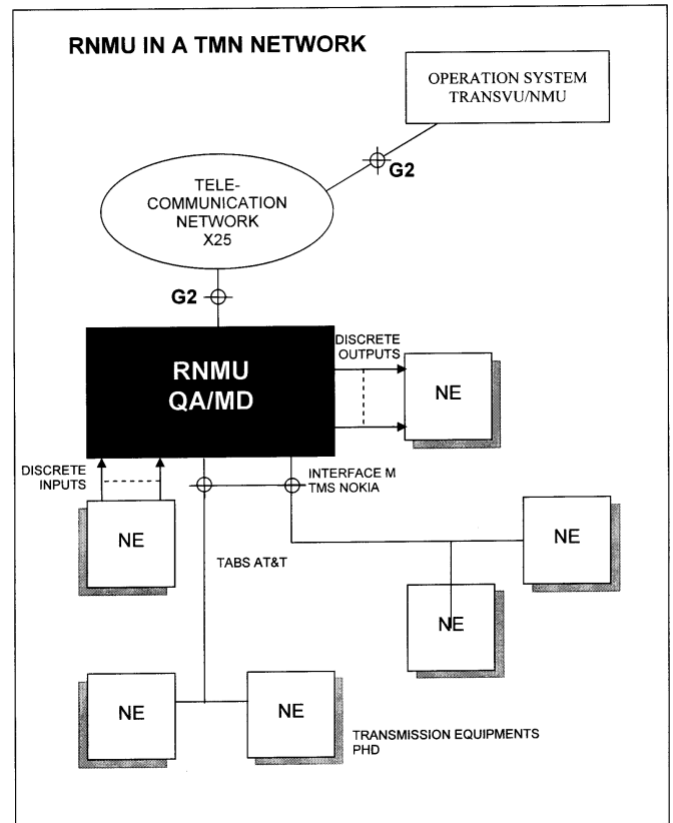
This standard interface (Q_x or Q₃) recommends use of OSI communication stack as well as CMIP management protocol. It also defines the information models (MIB) to support.



RNMU IN A TMN NETWORK

The RNMU has been conceived to allow management via a Q interface of NEs which normally can only be controlled by proprietary protocols or discrete contacts.

In TMN terminology, the RNMU is a Q Adaptator (QA) or a Mediation Device (MD).





RNMU SPECIFICATIONS

SPECIFICATIONS FUNCTIONALITY

- ◆ Management of Network Elements :
 - discrete inputs
 - discrete outputs
 - proprietary protocols on serial ports
- ◆ Proprietary protocols supported :
 - TABS from AT&T
 - TMS from NOKIA
- ◆ Fault, Control, Performance and Configuration Management
- ◆ G2 Agent (AT&T protocol)
- ◆ Object oriented modelling of managed resources (MIB)
- ◆ X 25 network support
- ◆ Downloadable RNMU software
- ◆ User interface locally or remotely accessible (through PAD facilities). Access protection by passwords.

SPECIFICATIONS HARDWARE

- ◆ Multiprocessor architecture
A basic RNMU includes :
 - A CPU board
 - An I/O board
 - A power supply
- ◆ CPU board :
 - MOTOROLA 68EC030
 - MOTOROLA 68302
 - EPROM : 128 Kbytes or 256 Kbytes
 - Flash Eprom : 2 Mbytes
 - Dynamic RAM : 1, 2, 4 or 8 Mbytes
 - Static RAM : 256 Kbytes (battery protected)
 - 3 serial ports for high speed x 25 connections
 - 1 asynchronous serial port for local maintenance
 - 6 asynchronous RS 232 or RS 485 for NEs interfacing
 - 1 Ethernet/AUI interface (optional)
- ◆ I/O board :
 - CPU 87C31
 - 64 discrete inputs
 - 8 discrete outputs via optorelays
 - 8 analog inputs (option)
- ◆ 48 Vdc power supply
- ◆ Stainless steel housing, 19 inches
- ◆ Compliant with EMI/RFI standards



RNMU SPECIFICATIONS

TECHNICAL SPECIFICATIONS

Power supply

- ◆ Input voltage range 48 Vdc nominal, +/- 20%
Positive pole grounded
- ◆ Power consumption < 50 Watts

Central Processing Unit, CPU Card

- ◆ CPU's Motorola 68030 + 60302 Coprocessor
- ◆ Frequency, 68030 24.5760 MHz
- ◆ Frequency, 68302 12.2880 MHz
- ◆ Boot EPROM 128K/256kBytes
- ◆ Flash memory 2 Mbytes
- ◆ Battery Backed Up Static Memory 256 kbytes
- ◆ DRAM 4 Mbytes standard / 8 Mbytes max

Central Processing Unit, IO Card

- ◆ CPU Intel 87C31
- ◆ Frequency 11M059
- ◆ EPROM 32 kbytes
- ◆ Static Ram 32 kbytes

Digital inputs (DI)

- ◆ Nominal voltage 48Vdc
- ◆ 64 inputs, three different input types, non isolated.
Type selectable per input.
- ◆ Input type 1 Voltage free contact, DI input to ground.
Nominal current = 2.5 mA
- ◆ Input type 2 DI pulled to ground by PNP transistor, emitter grounded.
Nominal current = 2.5 mA
- ◆ Input type 3 DI pulled to ground by NPN transistor, emitter grounded.
Nominal current = 2.5 mA

Digital outputs

- ◆ Outputs 8 outputs on optorelays
- ◆ Voltage rating 60 Volts, VDR protection
- ◆ Dielectric strength 4kVrms input/output (optorelays)
- ◆ Rated current 250 mA

Optional Analog Inputs

- ◆ Type of analog inputs (8) 4-20 mA standard.
Other types available on request.

Normative references

- ◆ EN 55022 Emission/Radiated
- ◆ EN 55022 Emission/Conducted, DC
- ◆ IEC 801-2 Susceptibility/Electrostatic discharge, level 2 (4 kV)
- ◆ IEC 801-3 Susceptibility/Radiated, level 2 (3 V/m)
- ◆ IEC 801-4 Susceptibility/Conducted/Fast transients, 0.5 kV
- ◆ IEC 801-5 Susceptibility/Conducted/Surges, 0.5 kV