

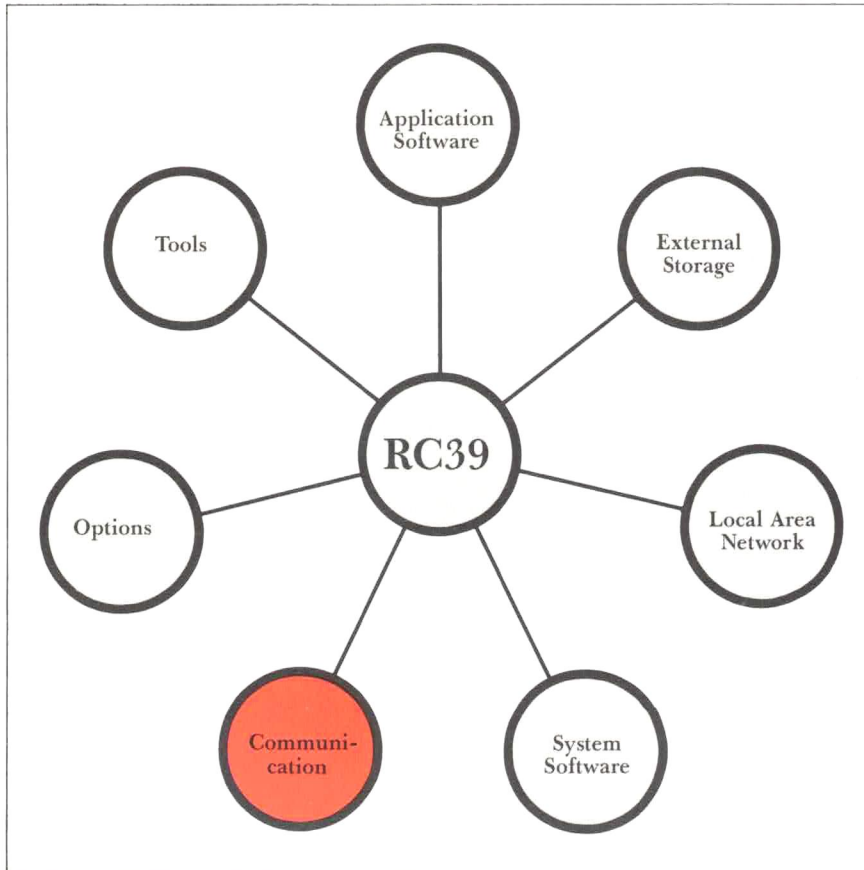
RC3931 Communication Processor

The RC3931 Communication Processor is a flexible, high-performance and modular subsystem of the RC39 computer.

The Communication Processor modules are designed to manage present-day communication requirements in an effective and elegant manner. The design of this powerful communication facility incorporates the ability to expand and modify the system and in this way to cater for new market standards.

Communication with other computers is effected by means of local microprocessors, thus leaving the local RC39 environment unaffected by even the most intensive data communication.





The RC3931 Communication Processor is a flexible subsystem of the RC39 multi-user computer. The RC3931 functions as:

- An IBM 3274 cluster control unit;
- An interface to the Public Communication Network, either the telephone based DATEL service or the X.21 DATEX service.
- A local area network interface;
- A control unit for the download of emulators to terminals connected via RcCircuit.

The Communication Processor is based on a modular design consisting of a standard processor and a number of options, which are bought separately and combined according to specific requirements. Description of the units required for a specific function is given in the data sheet for the software package in question.

Local Area Network

A local area network connection of RC39 opens up a range of possibilities of cooperation between RC39 and the RC Partner microcomputer, the RC8000 minicomputer, and between multiple RC39 multi-user computers, provided that they are connected to the same local area network, whether RcMicronet or Ethernet.

RcCircuit

The low-cost terminal network used for RC45 and RC855 terminals, actually consists of two twisted pairs within a single cable:

RcCircuit-I connecting the terminals to the communication processor.

RcCircuit-II establishing the connection between the terminals and the local application processor in RC39, i.e. the RC39 base system. This design prevents bottlenecks in the system arising from shared transmission medium and shared control units/adapters. In other words, the terminals communicating with the local processor at a given time do not share resources with those communicating externally, to the common advantage of all users.

In its capacity of control unit for downloading of programs, the Communication Processor offers a menu of emulators for RcCircuit connected terminals – RC45 and RC855. The menus may be adapted individually to each screen.

RC3931

Communication Processor – standard unit

RC3931 is a multibus board with a “single board computer” supporting the overall control of the communication functions. This board is supplied with software and a user’s guide to the Communication Processor, covering all its functions. The principal processors on the board are an Intel 80186 microprocessor running at 8 MHz, an Intel 82586 local area network controller, an Intel 8274 multi-protocol controller for serial communication connections and 512 Kbytes RAM. The program which is executed by RC3931’s microprocessor, is loaded from files stored on the RC39 disk.

External connections:

X.21, max. 2400 bps,

Local Area Network: requires an F620 or F621 adapter.

F641/F642 Communication Adapter

RcCircuit-I: 2-wire, twisted pair, 250 Kbps, multipoint/pollled.

One adapter: max. 16 terminals;
two adapters: max. 32 terminals.
3274 BSC – V.24/X.21-bis/X.21 (F641).

3274 – SNA/SDLC – V.24/X.21 bis (F641).

3274 SNA/SDLC – X.21 (F642).

Speed:

V.24:

modem controlled up to 9600 bps;
with two F641 adapters and only one 3270 host connection up to 19200 bps (high performance).

X.21:

DCE controlled up to 9600 bps.

F620 RcMicronet Adapter

F620 enables connection to the low-cost RcMicronet local area network. RcMicronet follows the Ethernet method (CSMA/CD) for access to the network, with a data transmission rate of 1 Mbps. F620 is mounted on the RC3931 board.

External connection:

RcMicronet, 1 Mbps CSMA/CD, via transceiver cable and transceiver.

F621 Ethernet Adapter

F621 enables connection to a local area network of the standard Ethernet type. F621 is based on an Intel 82501 transmit/receive chip. As is the case with F620, F621 is mounted on the RC3931 board. On this account F620 cannot be co-mounted with F621.

External connection:

Ethernet, 10 Mbps CSMA/CD (IEEE 802.3), via transceiver cable and transceiver (not supplied by RC Computer).

