The 20-90 is a simple to configure POCSAG paging transceiver with high sensitivity receiver combined with a 60mW transmitter. It operates over the frequency range of 142-175MHz (VHF) & 440-470MHz (UHF) decoding and encoding 512, 1200 or 2400 baud, alphanumeric or numeric messages. The 20-90 supports multiple message queueing and will queue up to four 73 character messages or multiple smaller messages.

20-90 VHF / UHF Ethernet Transceiver

- Can be controlled via an RS232 serial interface or TCP/IP (optional) to provide numeric, alphanumeric and tone only POCSAG encoding;
- Enables a user to call a pager (over 2,000,000 codes), append an appropriate priority level (1 of 4) and add an alpha or numeric message;
- Supports full batching of serially queued input messages;
- Can be configured to automatically respond with checksum information of the last received message;
- Uses an intelligent self-adjusting channel busy check to prevent message collision or corruption;
- The receiver is supplied with clean contacts rated at 1A 24V DC operation. LEDs indicate receiver operation and status.

Key Features:

- Supports Salcom relay control protocol to control one on-board relay plus several "virtual outputs".
- TCP/IP connectivity;
- Virtual outputs can be used to remotely trigger input or periodic messages and provide a mechanism to acknowledge reception of messages.
- 2 switch inputs with different pre-programmed messages on high and/or low transition.
- Can transmit the received signal strength of the last received message allowing the receiver positioning and system health to be monitored.
- FSK with NRZ Data
- 142-175MHz (VHF) & 440-470 MHz (UHF) variants available
- 100mW

Applications:

- **Paging Transceiver**: allowing both the encoding and decoding of paging messages.
- **Paging Receiver (only—by configuration):** allowing the decoding (only) of paging messages where desired.
- **Transmitter**: With channel busy check function before transmissions.
- **Autonomous Store & Forward Paging Repeater** with duplicate message reject.
- **Point to Point raw serial link**
- **Allows TCP/IP** output for closed loop system monitoring of messages received

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Technical Specification 20-90 VHF / UHF Transceiver and Store & Forward Repeater	
Frequency Range	142-175MHz (VHF) 440-470MHz (UHF)
Frequency Selection	User configurable
Power Supply	+13.8V typical (11 to 15 VDC range)
Power Consumption	Standby: TBA Transmit: TBA Relays: 18mA per energised relay
Transmit Power	10mW, 50mW, 100mW
Channel Spacing	12.5kHz, 6.25kHz
Modulation	FSK with NRZ data
Deviation	±4.5kHz & ±2.3kHz
Receiver Sensitivity	Approx -120 dBm
Baud Rates	512, 1200, 2400
Message Format	POCSAG
Configuration Application	Salcom Configuration Tool (Sacoto)
Programming Cable	Ethernet or Serial cable
Serial Port	9600 , N, 8, 1; RS232
Serial Protocols	Salcom
Discrete Inputs	2 Switch inputs
Discrete Outputs	2 Relay Contacts (1A @ 24VDc); 2 Open Collector (100mA max) Note: Not suitable for 240VAC Connections
Connectors	Serial Port (RS232) x 2 = RJ12 (6P6C) x 2 Input / Outputs = RJ45 (8C) Ethernet SMA RF output
Power Connector	2-way plug & socket, screw connections
RF Connector	50Ω BNC
Environmental Protection	Not suitable for outdoor use and should be protected from adverse environmental conditions
Operating Temperature	-10ºC to +50ºC (+14ºF to +122ºF)
Indicators	Power LED (Green) - Slow Flashing = Normal Operation Status LED (Red) - On = Transmitting - Flashing (3 times/sec for 7 secs) = Error Condition
Weight	178g
Enclosure Dimensions	130mm x 68mm x 31mm (WxDxH)
Enclosure Material	Extruded aluminium
Colour	TBA
Type Approvals	AS/NZS 4769.1:2000 + Amendment 1:2002 (RF) EN 300-224-2 (RF) (to follow) FCC CFR47 Part 90 (RF) (to follow) FCC CFR47 Part 15 (EMC) (to follow) EN 301 489-2 V2.1.0 (EMC) (to follow) EN 60950-1:2006 (Safety) (to follow)

Programming software will be available for free download at: www.salcom.com/products/page/20-90