# Novidades – Novos Modem e Rádios para Radio Packet em alta Velocidade:

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## *Recebido por PU2TIY – Frederico Joly*

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O que estamos esperando para montar nossas redes baseadas nessa tecnologia ?

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Here are my top reasons for using off the shelf Part 15 wireless ethernet devices for Amateur Radio RF networking:

1.) They are fast, speeds in the 1-11 Mega-bit ranges.
2.) They already opperate on frequencies allocated to amateur radio.
3.) As is, under Part 15 they have proven to work for links 5-20 miles
4.) They are cheaper than a traditional ham packet setup.
5.) They use a proven sucessful networkable protocol, TCPIP.
6.) They use a modern modulation technique called Spread Spectrum

7). It will probably take decades for hams to come up with anything more well suited for high speed RF networking.

Proof is in the pie:

1.) All 2.4 GHz DSSS 802.11 is 11 Mbps with slower fall back rates. http://hydra.carleton.ca/info/ (Pay no attention to the outdated prices or advertised ranges)

2.) You have 3 bands to choose from 900 MHz, 2.4 & 5.7 GHz. (No re-rocking, reprogramming needed!) Don't like microwave propagation? Legally to do any significant speeds you really need to make use of the 900 MHz bands and up. (if we fail to use these bands we will eventually loose the allocations)

Speed and or bandwidth constraints for data [97.307(f)(1)]

| Frequency Range | Speed Limit for Specified Codes | Maximum Bandwidth for Unspecified Codes |
|---|---|---|
| 50.1 - 148 MHz | 19.6 kilobauds | 20 kHz |
| 222 - 450 MHz | 56 kilobauds | 100 kHz |
| Above 902 MHz | No speed limit | No bandwidth limit |

3.) Review what commercial ISP's have been doing. http://isp-lists.isp-planet.com/isp-wireless/archives/
http://www.oreillynet.com/pub/a/wireless/2001/05/03/longshot.html

4.)
-Typical 1200/9600 Ham setup-
Paccomm Tiny 2 - $150
MFJ data radio - $120
100ft RG-8/9913 - $ 55
Decent Antenna - $ 60
TOTAL: $385

-Wireless ethernet-
WLAN NIC/AP - $150
100ft LMR-400 - $ 65

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 24dB Parabolic  - $ 70
            TOTAL: $285
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Note:
Using AXIP technology you can carry existing AX.25 traffic over a wireless ethernet link.

Find out more:
Using Part 15 Wireless Ethernet Devices For Amateur Radio:
http://www.qsl.net/kb9mwr/projects/wireless/plan.html

Green Bay Professional Packet Radio:
http://www.qbppr.org
(homebrew bi-directional amplifier designs and path-loss calculators) A group that actually wants amateur packet radio to evolve sometime this century.

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