 <b>DAVE s.r.l.</b> <a href="http://www.dave.eu">www.dave.eu</a>		
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# Qong



**DN-QELK-001**

*Running OPIE on Qong*



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<i>History</i>		
1.0.0	April 2009	First release

# 1 - Introduction

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This design note shows OPIE (<http://opie.handhelds.org/overview.php>) running on Qong.

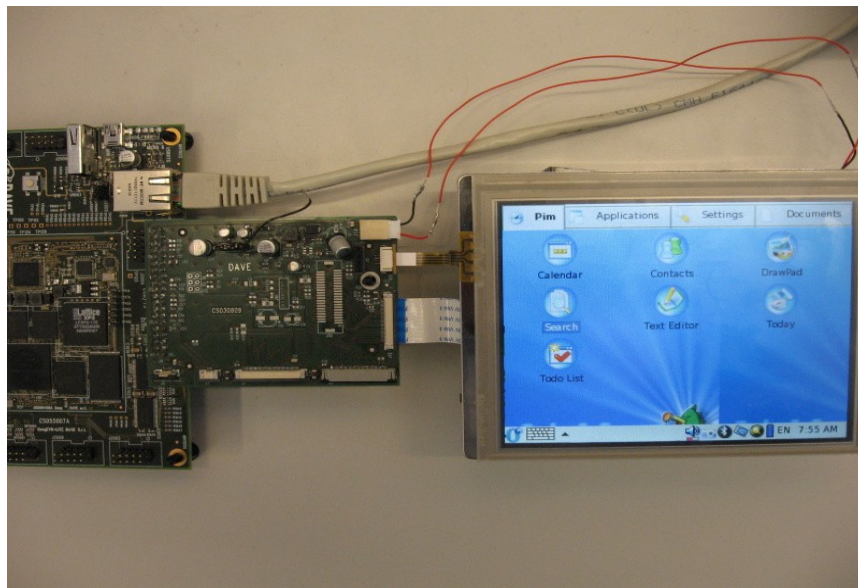
OPIE (Open Palmtop Integrated Environment) is a completely open source graphical user interface for Linux devices. It is a fork of the well known Qtopia environment from Trolltech and it features a complete PIM (personal information) framework, personal productivity, networking and multimedia applications. For more information, please refer to <http://opie.handhelds.org>.

OPIE is included in the Ångström (<http://www.angstrom-distribution.org>) distribution and can be built using the OpenEmbedded (<http://wiki.openembedded.net>) build system.

## 2 - OPIE on Qong

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To build OPIE, we used the OpenEmbedded build system, customized for the Qong platform and with the resulting root file system configured for the QongEVB-L. As you can see in the following pictures, we connected a 320x240 5.7" display with touch screen.



The resulting root file system size is about 46 MB and can be extended using the *opkg* package manager. A list of applications included in the OPIE environment can be found here: <http://opie.handhelds.org/cgi-bin/moin.cgi/Applications>.

CPU load and memory usage are reported in the following screenshot which shows the result of the execution of the `top` command while the `opie-eye` application (OPIE image viewer) is loading a 1024x768 jpeg image.

```
top - 13:33:48 up 36 min, 1 user, load average: 0.40, 0.19, 0.13
Tasks: 36 total, 1 running, 35 sleeping, 0 stopped, 0 zombie
Cpu(s): 27.2%us, 1.0%sy, 0.0%ni, 71.9%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Mem: 256164k total, 46004k used, 210160k free, 0k buffers
Swap: 0k total, 0k used, 0k free, 29560k cached
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1937	root	15	0	13356	7004	5372	S	20.5	2.7	0:02.95	opie-eye
1938	root	16	0	9304	3948	3472	S	6.6	1.5	0:00.35	opie-eye_slave
1936	root	15	0	2232	1076	876	R	0.7	0.4	0:01.40	top
59	root	10	-5	0	0	0	S	0.3	0.0	0:00.35	mxc_spi.1
1	root	15	0	1496	564	500	S	0.0	0.2	0:01.50	init
2	root	10	-5	0	0	0	S	0.0	0.0	0:00.00	kthreadd
3	root	34	19	0	0	0	S	0.0	0.0	0:00.00	ksoftirqd/0
4	root	RT	-5	0	0	0	S	0.0	0.0	0:00.00	watchdog/0
5	root	10	-5	0	0	0	S	0.0	0.0	0:00.13	events/0
6	root	14	-5	0	0	0	S	0.0	0.0	0:00.03	khelper
56	root	10	-5	0	0	0	S	0.0	0.0	0:00.00	kblockd/0
62	root	20	-5	0	0	0	S	0.0	0.0	0:00.00	ksuspend_usbd
65	root	10	-5	0	0	0	S	0.0	0.0	0:00.00	khubd
93	root	24	0	0	0	0	S	0.0	0.0	0:00.00	pdflush
94	root	15	0	0	0	0	S	0.0	0.0	0:00.00	pdflush
95	root	19	-5	0	0	0	S	0.0	0.0	0:00.00	kswapd0
96	root	19	-5	0	0	0	S	0.0	0.0	0:00.00	aio/0
726	root	11	-5	0	0	0	S	0.0	0.0	0:00.38	mtddblockd
795	root	10	-5	0	0	0	S	0.0	0.0	0:00.00	kpktgend_0
798	root	15	0	0	0	0	S	0.0	0.0	0:00.16	mxc_ts
799	root	10	-5	0	0	0	S	0.0	0.0	0:02.24	rpciod/0
816	root	12	-4	1844	608	380	S	0.0	0.2	0:00.35	udev
1571	daemon	17	0	1480	444	364	S	0.0	0.2	0:00.03	portmap
1598	root	18	0	2068	492	400	S	0.0	0.2	0:00.00	dropbear
1606	root	15	0	2600	696	636	S	0.0	0.3	0:00.06	syslogd
1608	root	25	0	2536	604	532	S	0.0	0.2	0:00.24	klogd

Other images of OPIE running:



Fig. 1: Opie Eye showing a 1024x768 image



*Fig. 2: OPIE PIM main menù*