

Vela

Telescope Control System in the 21st century



DeepskyLog

Vereniging Voor Sterrenkunde
Association for Astronomy

Wildcard
Innovations

TERZAN 7
GUIDE 7+4 0105

EXIT

ENTER

Argo Navis

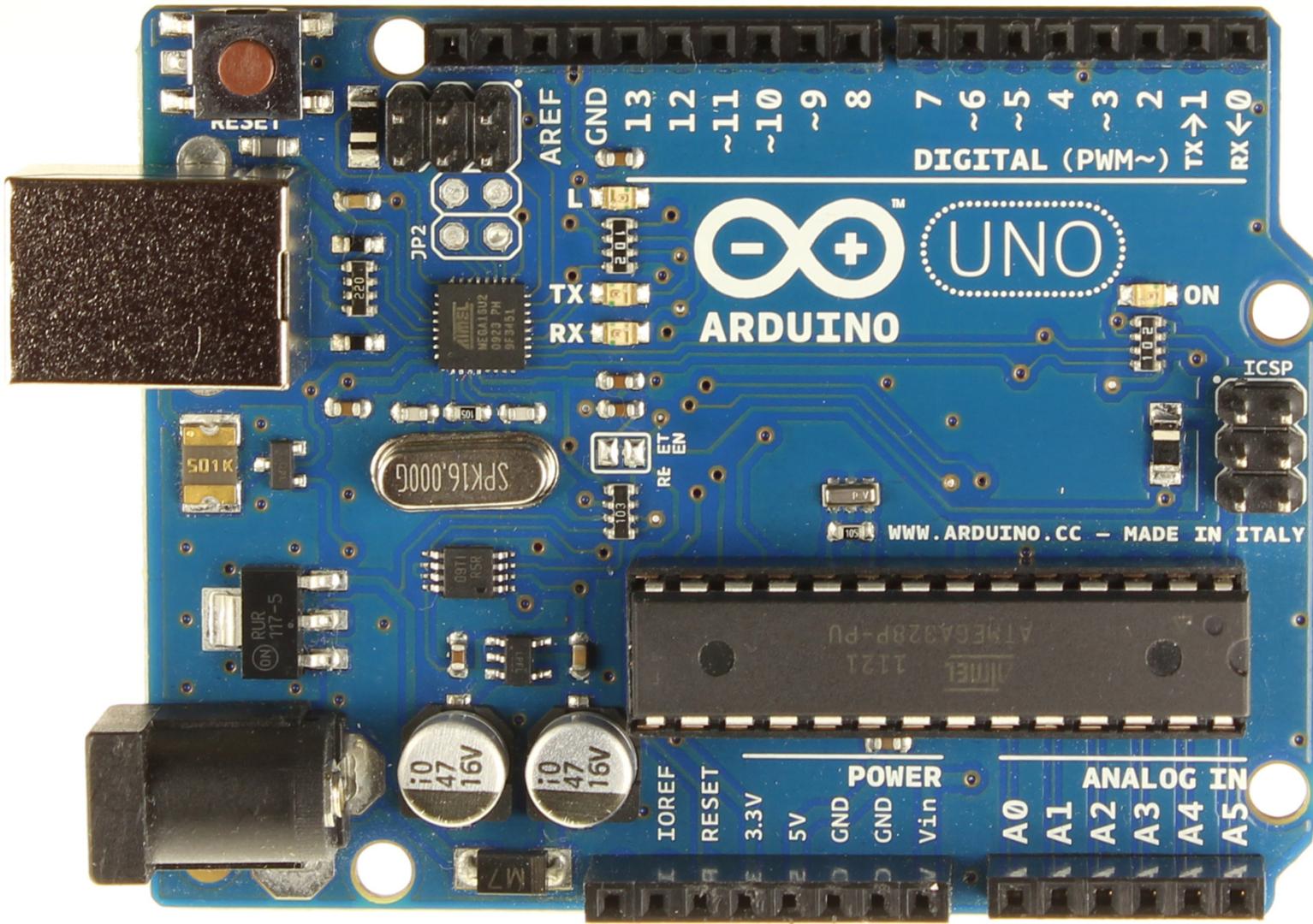
Drawbacks

- Only settings circles
- No internet connection to upload new objects, lists, comets, ...
- Limited memory
- Expensive

Going further

- Android smartphone / tablet ($>= 4.3$)
- Arduino hardware + Bluetooth shield
- Control
 - Mirror fan
 - Secundary mirror heating
 - Setting circles
 - Motors
- Inexpensive

→ Vela Telescope Control System



Status

- <https://github.com/DeepskyLog/Vela>
- Connection with
 - DeepskyLog
 - Bluetooth on arduino

← Settings

Primary mirror Fan

Select this if the fan for the primary mirror
is connected.



Connections

DeepskyLog

Bluetooth

← DeepskyLog Sign in

Login Name

Password

SIGN IN

1	2	3	4	5	6	7	8	9	0
q	w	e	r	t	y	u	i	o	p
a	s	d	f	g	h	j	k	l	
z	x	c	v	b	n	m	×		
?123	,			.					



← DeepskyLog Sign in

Successfully logged in as Wim De Meester

LOG OUT

1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p

a s d f g h j k l

z x c v b n m 

?123 , . 





15:01

← Bluetooth connection

RSSI

Digital Out

Pin

[2]

write

NO

PWM

[3]

write

An app wants to turn on Bluetooth.

DENY

ALLOW



20°



15:01

← Bluetooth connection

RSSI

Digital Out

Pin
[2]

write



PWM

[3]

write



CONNECT



Next steps

- Write Arduino sketch to control fan
- Make hardware
- Release Vo.1

Next steps: hardware

- Add temperature sensors
 - Air
 - Secondary mirror
 - Primary mirror
- Add heating
- Add Digital encoders
- Add motors

Next steps: Software

- Add night mode
- DeepskyLog integration - offline
 - Use the objects
 - Use observing lists
 - Use list of locations to get weather and driving directions
 - Enter observations (Speech recognition?)
 - ...

Next steps: Software

- DeepskyLog integration - online
 - Show all drawing of the object to observe
 - Show starcharts
 - Show observations
 - ...
- Track comets / asteroids / satellites